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16. ABSTRACT

This document compiles the January 1979 through December 1979 issuances of ENVIRONMENT MIDWEST into a single volume. This periodical publication reports on environmental protection efforts in the midwestern United States within the states of Illinois, Indiana, Michigan, Minnesota, Ohio and Wisconsin and includes coverage of the Great Lakes basin.

17. KEY WORDS AND DOCUMENT ANALYSIS

a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
Air pollution, Asbestos, Barium, Benzene, Diesel engines, Electromagnetic interference, Fishes, Garbage, Natural Gas, Noise pollution, Nuclear reactors, Radiation, Rural areas, Sewers, Sludge, Smog, Water quality	Acid rain, Automobile emissions, Bottle bills, Clean Air Act, Gasohol, Great Lakes, Hazardous wastes, I/M (inspection/maintenance), Lake Erie, Pollution trade-offs, Polychlorinated biphenyls	13B

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calcium hydroxide; correction. **PROPOSED RULES:** Air quality implementation plans; delayed compliance orders: Ohio. **NOTICES:** Pesticides; premanufacture exemption applications: Hesser and Associates. Pesticides; temporary tolerances: 2,6-dichloro-4-nitroaniline. Pesticides; tolerances in animal feeds and human food: Mobay Chemical Corp. (2 documents) Review of preliminary draft criteria for particulate matter and sulfur oxides; correction. ■ **NOVEMBER 21, 1979 - PROPOSED RULES:** Air pollution control, aircraft and aircraft engines: Turbine engines, large in-use gas; standards; availability of economic impact assessment and extension of time. Air quality control regions; criteria and control techniques: Attainment status designations; Pennsylvania. Air quality implementation plans; delayed compliance orders: Kentucky (2 documents) Toxic substances: Polychlorinated biphenyls; chemical waste landfill criteria; large PCB capacitors disposal requirements. **NOTICES:** Pesticides; emergency exemption applications: Benomyl. Oxamyl. Permethrin. Pydrin. Strychnine baits. Toxic substances: Polychlorinated Biphenyls (PCB's); approved disposal faciltities. ■ **NOVEMBER 23, 1979** - See also Interagency Regulatory Liaison Group. **RULES:** Pesticide chemicals in or on raw agricultural comomodities; tolerances and exemptions, etc.: Atrazine. Carbaryl. Chlorpyrifos. Methomyl. **PROPOSED RULES:** Air quality implementation plans; approval and promulgation: Nonattainment areas; evaluation of plan revision, submissions; supplement. Air quality implementation plans; delayed compliance orders: New York; withdrawn. Toxic substances: Data reimbursement; advance notice; extension of time. Polybrominated biphenyls (PBB's) and tris (2.3 dibromopropyl) phosphate; importation or manufcture notice requirement; correction. **NOTICES:** Meetings: Administrator's Toxic Substances Advisory Committee; cancelled. Presticide registration, cancellation, etc.: Apron 355D Fungicide. ■ **NOVEMBER 26, 1979 - RULES** Air quality control regions; criteria and control techniques: Attainment status designations; Colorado Air Quality implementation plans; approval and promulgation; various States, etc.: Alabama. **PROPOSED RULES:** Waste management, solid: Hazardous waste guidelines and standards; criteria; extension of time and clarification. Water quality standards; State programs; Alabama. **NOTICES:** Air pollution; ambient air monitoring reference and equivalent methods applications, etc.: ASARCO models 500 and 600 sulfur dioxide monitor. Environmental statements; availability, etc.: Agency statements, weekly receipts. Marine sanitation device standards: Virginia. Meetings: Science Advisory Board (2 documents) Toxic and hazardous substances control: Premanufacture notices; monthly status report. ■ **NOVEMBER 27, 1979 - RULES:** Air quality implementation plans; delayed compliance orders: Ohio. Noise abatement programs: Transportation equipment; trucks, medium and heavy; withdrawal. **PROPOSED RULES:** Air pollution; standards of performance for new stationary sources: Incinerators. Sewage treatment plants. Air quality implementation plans; approval, adoption, and submittal: Discretionary authority. Air quality implementation plans; approval and promulgation; various States, etc.: Delaware. Minnesota. **NOTICES:** Meetings: FIFRA Scientific Advisory Panel; correction Science Advisory Board. Noise pollution control: Air compressors, portable; noncompliance remedies. Water pollution control: Safe drinking water; review of exemptions granted by South Carolina. Safe drinking water; review of variances and exemptions. ■ **NOVEMBER 28, 1979 - RULES:** Air quality implementation plans; delayed compliance orders: Massachusetts. **NOTICES:** Meetings: Drinking Water National Advisory Council. ■ **NOVEMBER 29, 1979 - RULES:** Water pollution control: Drinking water; interim primary regulations; control of trihalomethanes.

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ENVIRONMENTAL IMPACT STATEMENTS

Sponsoring Agency, Project Number, Type of EIS	Project Location	Description	Summary of Comments	Rating, Date
Housing and Urban Development 79-046-1024 (D[illegible]	Maple Grove, Minnesota	Mortgage insurance for Rice Lake Trails and Rice Lake Woods developments.	Concern regarding increased automobile traffic impacts, wetlands impacts, and lack of migration.	ER-2 10/23
Fe[illegible] Highway Administration 79-043-422 (Draft)	Allen County, Indiana	Construction and improvement of 4-lane connector highway. Mayhew-Maplecrest corridor.	No major concerns.	LO-1 10/22
Housing and Urban Development 79-036-1036 (Final)	Madison, Wisconsin	Urban redevelopment project - Capitol Center.	Concerns adequately addressed.	1 10/22
U.S. Army 79-048-2206 (Draft)	Sparta, Monroe County, Wisconsin	On-going and projected mission of Army installation at Fort McCoy.	Final EIS should address impacts of major training activities and mitigation plans in detail.	LO-2 11/5
Federal Highway Administration 79-055-425 (Draft)	Summit County, Ohio	Construction of 4.5 miles of 6-lane highway.	Environmental concerns regarding noise impacts, loss of wetlands, and lack of mitigation.	ER-2 10/30
Housing and Urban Development 79-056-1025 (Draft)	Butler County, Ohio	Roadway improvements, and water and sewer lines in support of 88-acre development.	No real assessment of alternatives. Potential to destroy 577 acres prime of farmland.	ER-2 10/30
Corps of Engineers 76-112-133 (Final)	Great Lakes, St. Lawrence Seaway	Navigation season extension study.	Bulk of environmental concerns not addressed. Call for hiatus on operations.	3 11/5
Federal Highway Administration 78-075-426 (Final)	Oshkosh, Winnebago County, Wisconsin	Railroad relocation. Consolidation of Soo Line into C&NW R.R. in Oshkosh.	Environmental concerns adequately addressed. Contingency plans for relocation should be included.	2 11/9
Federal Highway Administration 78-034-426 (Final)	Sheboygan County, Wisconsin	Taylor Drive improvement.	Comments adequately addressed.	2 11/19
Federal Highway Administration 78-001-422 (Final)	Lafayette, Tippecanoe County, Indiana	Relocate and consolidate 6.8 miles of Norfolk & Western and Louisville & Nashville RRs right-of-way.	Comments adequately addressed.	2 10/31
Federal Highway Administration 76-064-422 (Final)	Allen County, Indiana	Construction 4-lane divided highway. Ft. Wayne southeast bypass.	Comments adequately addressed.	2 11/15
Housing and Urban Development 79-002-1201 (Final)	Carol Stream, DuPage County, Illinois	Construction housing development, Spring Valley.	Major environmental concerns addressed.	2 11/12
Federal Highway Administration 79-059-422 (Draft)	Columbus, Bartholomew County, Indiana	Connect U.S. 31 with S. R. 46 via extension of Tenth St.	Request more detailed analysis of impacts on noise and soil resource base.	LO-2 11/19

CODE:

LO—Lack of objections or minor changes suggested.
ER—Environmental reservations on certain aspects of project; suggest further study of modifications or alternatives.
EU—Proposed action environmentally unsatisfactory, potential safeguards are insufficient.
1—Adequately sets forth impact and alternatives to proposed action.
2—Insufficient information; EPA cannot fully assess project but can make preliminary determination of impact.
3—Draft inadequately assesses project and/or alternatives, EPA requests substantial revisions in draft.

All Region V EIS Comments are prepared by the Office of Federal Activities, Environmental Impact Review Staff. For more information or to obtain copies of EIS comments, contact Barb Taylor at (312) 353-2307, U.S. EPA, Region V, 230 S. Dearborn St., Chicago, IL 60604.

United States
Environmental Protection
Agency

Region V
230 South Dearborn St.
Chicago, Illinois 60604

January, 1979

EPA ENVIRONMENT MIDWEST

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MIDWEST TACKLES HAZARDOUS WASTES

See stories 4 - 8

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EPA ENVIRONMENT MIDWEST

On The Cover:

Officials from Michigan's Department of Natural Resources inspect a hazardous waste disposal site prior to cleanup.

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Birute Bulota. . . . . Graphic
Nancy McKinney . . . . Brief

NOV's

NOV's

- Granite City Steel Plant, Granite City, Il, Particulates.
- ARMCO Steel, Inc., Middletown, OH, particulates.
- H.K. Porter Co., Inc., Huntington, IN, asbestos.
- Marathon Oil Co., Brecksville, OH, petroleum loading and storage facility, hydrocarbons.
- Marathon Oil Co., Hammond, IN, petroleum storage terminal, hydrocarbons.
- Clark Oil Co., Hammond, IN, petroleum storage and loading facility, hydrocarbons.
- Continental Oil Co., Griffin, IN, hydrocarbons.

A Notice of Violation is an official warning from the Federal EPA that a source is in violation of existing air regulations. The polluter has 30 days from the notification date to negotiate a compliance schedule before the Agency seeks civil or criminal penalties.

Big Jim Takes A Walk

Buffalo Bill's
defunct
        who used to
        ride a watersmooth-silver
                                        stallion
and break onetwothreefourfive pigeons-
    justlikethat
                        Jesus
he was a handsome man . . . ©

--e e cummings

Fred Neumann

Those downtown newspapers call somebody else "Big Jim," but in this game, there was a Big Jim McDonald long before that other guy got his handle.

No question about Big Jim's size. He stands awful tall in this business of pollution cleanup, and his white horse has ridden a lot of miles since 1970, when he was named EPA's Midwest Enforcement Director.

Back in those days, lots of people in government were scared to death even to name the big polluters.

Not Big Jim. He named 'em, negotiated with 'em, sued 'em, and brought them into line. You people who lump all bureaucrats together as nine-to-fivers with brown lunch bags and crepe-soled shoes should know this guy. He's got class.

Just ask the lawyers, company chiefs, and government officials who played cards with him and his staff and nearly always lost. They got the message: Clean up or pay up. In the biggest poker game of all, a major U.S. steel company called his hand in court —and lost, paying $4.2 million in big blue chips.

But if he was a gunslinger, he was a fair one. He wasn't vindictive; he didn't carry a grudge. You could sit down with him and reason.

His record in bringing cleanup to the heavily industrial Midwest is the best in the business: settlement of all water and most major air problems in the Northwest Indiana steel complex; initiation of court actions against major municipal dischargers in the Great Lakes Basin; initiation of administrative action against Federal polluters. Not to mention the heat he put on to get paper and pulp mills, electric utilities, and refineries moving.

In a book on the infant years of the national environmental movement, one former top EPA official credits Jim McDonald with having set the leadership standard for the entire Federal pollution program.

I remember one characteristic moment at a staff meeting, a long time back, when there seemed to be incessant haggling over some bureaucratic point. "What's this got to do with cleaning up the air or water?" he asked. Nobody could answer.

But maybe that's what got him in the end. The game and the rules of cleanup are changing. The fallout of Proposition 13, complaints about over-regulation, more red tape in getting cases going, and the like have contributed to his decision to leave at the peak of an incredible career.

But he leaves a hell of a legacy. While the people he's worked for over the years have all basked in the reflected glory of his enforcement machine, he has always been the real star.

If the skies over Gary are a little bluer these days, and the water in Detroit and Cleveland is coming out a little cleaner, and the paper mills and power plants are behaving a little better, you can tell your kids about Big Jim McDonald, and that he cared.

Frank Corrado

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ZBB in the EPA

by W. W. Reid

A farm worker goes out to harvest zucchini. Are those vegetables safe to handle, or were they sprayed with Malathion the day before?

A little girl on an Indian reservation in Minnesota gets herself a glass of water from the kitchen tap. Is the water fit to drink? When was it last tested? By whom?

The EPA in Region V has the responsibility for seeing that agricultural insecticide use is monitored and controlled and that drinking water on Indian reservations is tested regularly. Add those two jobs to the hundreds of other EPA assignments involving air, water, toxic wastes, and all the rest and some basic questions arise: who does what and how much money are they given to get the job done? Since 1977, those questions have been answered in the EPA and throughout the Federal Government by Zero Base Budgeting.

Zero Base Budgeting (ZBB) calls for program managers to estimate the different funding levels at which different jobs can be done. The President's Office of Management and Budget (OMB) asks government agencies that want Federal money to describe precisely what will happen if only 50 percent of last year's funding is provided, or 80 percent, or 100 percent, or 150 percent, etc. The current guidelines call for programs to be funded at 80 percent of last year's budget, unless another funding level is justified. Each fiscal year, every program's budget is analyzed from top to bottom, instead of assuming that the same dollar amount is justified each year, with only the requested increases coming under close scrutiny.

"It's a good management analysis tool," said Bob Springer, Chief, Region V Planning and Evaluation Branch. "It's not a perfect system, but it does allow you to make some informed decisions." Under ZBB, the people who are program experts usually wind up preparing that program's budget, instead of leaving the process to budget experts who might not be as familiar with the program.

Under budget systems used in the past, the person doing the justifying was only interested in selling "this year's model," and not as likely to evaluate the entire program from the ground up, as must be done under ZBB. ZBB constantly requires a manager to make a thorough examination of the entire program. "This makes for more informed managers," Springer noted.

There can be several drawbacks to ZBB. Too much detailed analysis of all the various levels of operation can bog down an office or an entire agency. So much time can be spent in justifying operations that there's no time left to operate. Also, many managers misunderstand OMB's request for a range of operating levels and fear that they are necessarily going to be required to operate on less money. Often, the opposite is true; some programs may have to get by on 50 percent of last year's funds, but others may find their resources doubled.

Region V has fared quite well following U.S. EPA's first two years of ZBB, for two reasons. First, Region V can usually demonstrate a greater need for resources than most other Regions. For instance, 35 percent of the nation's industrial air polluters are located in Region V; Region V has 15 enforcement cases for each EPA attorney, while other Regions may have as few as two attorneys for each case.

Second, Region V was an EPA pioneer in ZBB. This Region was developing performance level options to match funding level options before ZBB became a household word. When the President instituted ZBB throughout the Federal Government, Region V was ready.

Still, there was plenty of work to be done, as Bob Springer recalled. "A lot of people got angry . . . they got buried in paper." But in the end, the paperwork paid off, said Springer. "Everyone was angry with the process, but happy with the result: We got all the positions we needed."

The effect of ZBB on the bureaucracy, on the environment, and ultimately on people has been quite evident. Many programs, even entire Regions, lost resources when funding that had been routinely allocated under old budget systems was revealed as unnecessary by ZBB. Those resources can be re-allocated elsewhere, as old problems are brought under control and new problems arise. It was discovered through ZBB analysis that Region V could carry on an effective program of protection for farm workers by monitoring pesticide use while spending only 60 percent of what was previously being spent to do the job. These and other savings went to help fund programs with greater financial need. For instance, EPA is responsible for testing the drinking water in parts of Indiana and on 21 Indian reservations throughout Region V, a program that involves 1,050 communities and affects more than 5 million people. ZBB determined that the job could only be properly done if twice as much money were spent. Because of the tough decisions already made by managers operating under ZBB throughout the Region, that money was available and was put to use.

Properly managed, then, Zero Base Budgeting can help make sure the little girl on the reservation is drinking safe water, can help reassure the farm worker that he's handling non-toxic zucchini, and can help the taxpayer feel a little better about how those tax dollars are being put to work.

Toxics in

National attention focused on the problem of hazardous waste disposal across the country as U.S. EPA Administrator Douglas Costle proposed a series of Federal Regulations intended to meet what he called "the critical need for controls on the management of hazardous wastes." Because of the heavy industrialization of the area, Region V States are deeply involved in this crucial issue, as evidenced by the recent conferences and court cases covered in the following stories.

EPA Moves to Control Wastes

EPA has announced its proposed regulations to ensure that the more than 35 million tons of hazardous wastes produced in the U.S. each year are disposed of safely. These rules are proposed under the Resource Conservation and Recovery Act (RCRA) of 1976.

"Hazardous wastes will be controlled from point of generation to their ultimate disposal, and dangerous practices that are now resulting in serious threats to health and the environment will not be allowed," EPA Administrator Douglas Costle said.

EPA has also proposed a list of 158 specific wastes it considers hazardous and which would fall under Federal regulation. In addition to the specific list, wastes would be considered hazardous if they are toxic, chemically reactive, ignitable, or corrosive.

The proposal also includes standards for maintaining, monitoring, and closing landfills, as well as encouraging alternatives to long-term disposal of hazardous wastes, such as recovery, detoxification, and incineration.

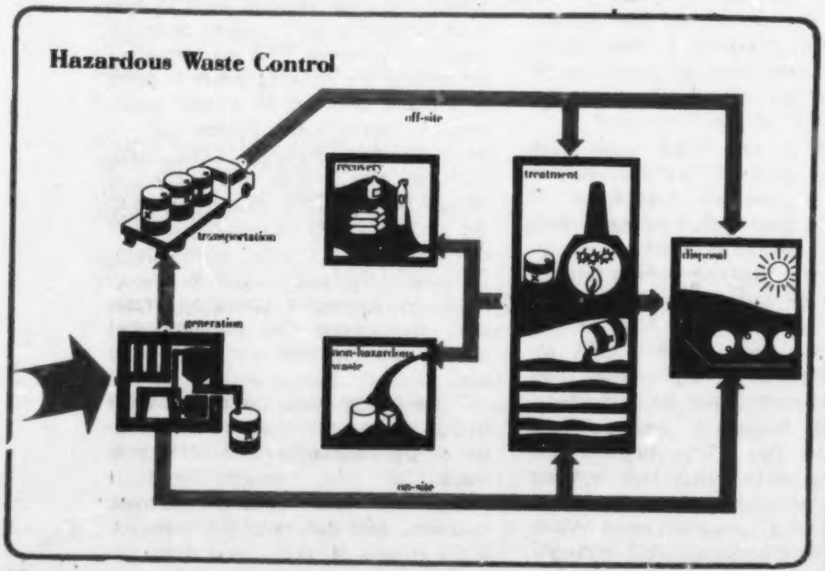
"This hazardous waste program will be complex," Costle said. "It will control over 35 million tons of waste. Some 270,000 waste-generating facilities, 10,000 transporters, and 30,000 treatment, storage, and disposal sites will be involved."

At the press conference following the announcement of the regulations Costle said, "Right now, it's proving to be almost impossible to permit or site new hazardous waste facilities. One of the reasons is the public's fear of having these anywhere near by. The fact of the matter is, you can design facilities that will adequately handle these kinds of wastes and if you're smart about what kinds of wastes you put there and how you deal with them, it is emminently do-able."

"The public's got to be persuaded of that, because quite frankly, if you shut down a facility that is adequately designed to handle this stuff— where do you suppose it's going to go?"

"IT's too convenient for one state to say 'let's make it some other state's problem.' You can't keep shipping this around like Charlie on the MTA. It's got to come to rest somewhere, and it's going to mean that public officials are going to have to be responsible about it and not simply duck the thing."

"Better that this stuff goes to a place that's designed for it than to just disappear in the night and we have no idea where it is."



Hazardous Waste Control

Conference

"Love Canal." You could hear those two words again and again at the International Conference on Hazardous Materials Management held in Detroit on December 4 and 5, 1978.

Speaker after speaker emphasized the connection between what happened at Love Canal, New York and the intensity of public feeling about hazardous waste.

The Conference, sponsored by the State of Michigan and the National Governors' Association (NGA), was attended by representatives from over 30 States and 4 Canadian provinces, from industry as well as from State, local, and Federal government.

"Love Canal is so much in the public mind right now. People have been given the feeling of impending danger. There is no feeling of security, that a facility will not cause pollution or health problems," said Beatrice Tylutki, director of the Solid Waste Administration, Environmental Protection Department of New Jersey, and chairman of the multi-State Resource Conservation and Recovery Act (RCRA) Task Force.

"In the public's mind, the notion of a *secure* chemical landfill is elusive. They just don't believe in it," said Sandra Gardebring, executive director of the Minnesota Pollution Control Agency.

The other incident which has become a major public concern is the inadvertent substitution of PBBs (polychlorinated biphenyls) for a cattle feed supplement and subsequent distribution of that feed to many Michigan farmers.

Because this accident was not discovered for approximately 9 months, there was extensive contamination of food products. The total damages, including settlements for loss of animals, has been estimated in the area of $100 to $200 million.

"The PBB incident was called 'the poisoning of Michigan' by the media. Because of it, our citizens are now afraid of any chemicals referred to by initials. The situation has become irrational," said William G. Turney, Chief of the Bureau of Environmental Protection, Michigan Dept. of Natural

the Midwest: What's Being Done?

Deals with Hazardous Wastes

By Nancy McKinney

Resources.

The effect of these stories on public opinion has been so negative that establishing any future hazardous waste disposal facility is seen as a problem of almost insurmountable dimensions.

"Not in my community; build it someplace else," is how Tylutki characterized public opinion. She pointed out that more facilities will be needed in the near future because of increased production and the closing down of unsafe storage facilities by RCRA.

"Regional facilities are needed, not just local ones," Tylutki continued, "but this makes siting even more difficult. Perfection of the state of the art is necessary so that people will not have health hazards in their backyards. Long-term safety is also imperative. We must provide citizens with the security of a continuous monitoring system."

"There's always the same deafening cry — take it somewhere else," said Turney.

"It's rather like the children's game of Old Maid — the object is to pass it off to the next guy," said Gardebring.

These statements emphasize how strongly public opinion is running on the hazardous waste issue.

As communities have begun to try to close down disposal facilities, and as public opinion continues to mount against siting of new facilities — where does this potentially hazardous material go?

Illegally dumped PCBs were cleaned up in Missouri and taken to Wilsonville, Illinois. (See following story on Wilsonville.) Michigan public opinion was so intensely against any hazardous waste disposal in that State, that much of Michigan's waste has gone to Wilsonville. The citizens of Wilsonville have closed down their facility and are trying to get what is stored there moved out. As a result, much of the waste is now being shipped to Sheffield, Illinois.

The citizens of Sheffield have met with representatives from Wilsonville to learn how to start a lawsuit to close the site in their community. Where does it go from here?

"The future of RCRA will be decided by the general public," said James R. Greco, director of governmental affairs, Browning-Ferris Industries. "We must assure ourselves and the public that hazardous waste can be handled safely."

"We need an informed and wise public. Not just public participation, but informed and wise public participation. With darn few exceptions, public participation has become a stonewall of opposition to siting. We have to deal with this issue, and soon," said William DeVille, staff chairman, National Governors' Association Subcommittee on Waste Management.

"There must be extensive public information efforts. Credibility of government is at a low point. But it will be at an even lower point if this problem is not addressed," said George Alexander, former Regional Administrator of U.S. EPA, Region V.

The need for a more informed public has been dramatically demonstrated in Minnesota. In 1974, the Minnesota Pollution Control Agency received a grant from U.S. EPA to site and operate a chemical disposal demonstration project. Its purpose was to have been to evaluate siting criteria, waste handling procedures, operations requirements, and the social and political processes involved.

"We never got anywhere near observing operations; we simply could not get a site. But we sure learned a lot about the social and political processes involved," said Gardebring. The grant had to be returned because each possible site had to be rejected because of local ordinances or tremendous public opposition.

There is currently a bill in the Michigan legislature outlining plans for a State-owned facility. "We don't think it's a panacea, but it will go a long way toward solving our problems," said Norris McDowell, public information officer for Michigan's DNR.

Governor William G. Milliken of Michigan has put his full support behind the bill, which he hopes will be

U.S. EPA urges members of the public to promptly report to State environmental agencies any suspected improperly managed, unpermitted, or clandestine hazardous waste disposal sites in their area. In Region V, contact:

ILLINOIS Mike Miller, Division of Land / Noise Pollution Control, Illinois EPA, 2200 Churchill Road, Springfield 62706. (217) 782-6760.

INDIANA David Lamm, Solid Wastes Division, Indiana State Board of Health, 1330 West Michigan Street, Indianapolis 46204. (317) 633- 0176.

MICHIGAN Dave Dennis, Chief, Oil and Hazardous Materials Branch, Michigan Department of Natural Resources, Stevens T. Mason Building, Lansing 48926. (517) 373-2794. Fred Kellow, Chief, Resource Recovery Division, P.O. Box 30028, Lansing 48909. (517) 373-7917.

MINNESOTA Thomas Clark, Chief, Enforcement Section, Minnesota Pollution Control Agency, 1935 West County Road, B-2 Roseville 55113 (612) 296- 7395.

OHIO Don Day, Chief, Office of Land Pollution Control, P.O. Box 1049, Columbus 43216. (614) 466-8934.

WISCONSIN Bob Krill, Director, Solid Wastes Division, Wisconsin Department of Natural Resources, P.O. Box 7921, Madison 53707. (608) 266-1327.

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passed early next session. March of 1983 is the target date for the facility to begin operating.

"I am increasingly concerned with what amounts to a nonsystem in the U.S. to cope with hazardous materials," Milliken said. "More problems are unearthed, detected, and diagnosed daily. Yet our ability to develop a rational program to resolve what, to many, is approaching a nightmare is not improving. The solution, it seems clear to me, is not to dwell on who should have done what yesterday, but rather on who should be doing what today and tomorrow," he continued.

The Michigan bill provides for the licensing of all facilities in the State and development of a mandatory treatment list classifying hazardous wastes. The bill includes an emergency fund for cleanup operations of bankrupt or abandoned sites.

If the bill passes, the facility will be on State-owned land; once the location is selected by the State, it is not subject to local ordinance or control. "Without this feature, no facility could be located in our State," said Turney.

Operating methods would be constantly updated to reflect the newest technology. Disposal methods would include incineration, chemical treatment, landfill and wastewater treatment.

"This facility will be a good neighbor," said Howard A. Tanner, director of Michigan's DNR. Extensive public information efforts are now underway to educate the public on the safety of such a facility.

The conference as a whole was judged "a great success" by Tanner. "The real mark of this conference will be the actions that result — in the immediate future, in the ensuing months, and in a year from now," he said.

Tanner closed the conference by saying: "Current strategies for implementation of RCRA need to be reassessed immediately. These programs should provide the national coordination for hazardous materials management without the excessive over-regulation that everyone fears. Failure to implement these laws means there is no national program."

The Wilsonville Dilemma

by Nancy McKinney

The importance of public opinion in disposal of hazardous waste is now being fully recognized all over the country. In Region V, the citizens of Wilsonville, Illinois have been involved for more than a year in a suit to close down a facility in their area. The original court ruling, in Wilsonville's favor, is now in the appeal process.

Controversy over a disposal site run by Earthline Corporation in Wilsonville was sparked by residents' concern about waste material contaminated with polychlorinated biphenyls (PCBs). This material was removed from an illegal PCB dump site in Missouri as a result of a cleanup operation under the direction of EPA, Region VII. Illinois EPA permitted disposal of the Missouri PCBs at the Wilsonville site.

Michigan DNR

Wilsonville residents didn't go along with the decision. After threatening to disrupt the disposal activity, they filed suit in Macoupin County Circuit Court to block further use of the facility. The Illinois Attorney General's office filed a similar suit. Both suits, which have been consolidated, allege that the hauling of PCBs through Wilsonville to be disposed of at the Earthline facility creates a threat to the health and safety of residents.

Although the Attorney General's office usually serves as the attorney for State agencies, it is not representing the EPA because of a difference of opinion on whether Earthline should be found in violation of State law.

The EPA position is to defend its decision to permit disposal at Wilsonville. Illinois Attorney General William S. Scott, on the other hand, has said his office will go all the way to the U.S. Supreme Court to keep the Earthline site at Wilsonville closed.

"We must show government and industry that it is not feasible to place deadly chemicals a few feet underground and expect them to go away, because they don't," Scott said during the trial.

On April 18, 1977 the Circuit Court ordered the temporary closing of the Wilsonville facility and removal of waste held there. Earthline appealed that action.

In June, 1977, in response to local citizens' concern, the IEPA called U.S. EPA, Region V, and requested a technical evaluation team report. The team visited the site and prepared a report based on its comparison with the requirements of the then-proposed regulations for PCB disposal. The conclusion was that the facility is a well-designed, secure landfill that provides disposal by environmentally acceptable methods.

An Illinois Appellate Court motion on September 14, 1978 reversed the Circuit Court's decision to remove wastes already at Wilsonville. It also denied an appeal by Earthline to keep the facility open until a final court decision. The facility has been closed since September 15.

If your community is having trouble with a solid waste, hazardous waste, or resource recovery problem, U.S. EPA can help. Region V is now providing technical assistance to local governments in this field. Our own staff, supplemented by a privately contracted consulting firm, is available. In addition, local officials who have successfully solved a variety of these problems in their own communities are willing to share their experiences with their fellow public officials via EPA's new Peer-Matching Program. Of course, our resources are limited, but do contact us for further information and for complete instructions on how to apply.

Contact: Robert Duprey
Regional Technical
Assistance Panels
U.S. EPA Region V
230 S. Dearborn St.
Chicago, IL 60604

Where Are The Hazardous Wastes in Region V?

By Art Baden

Since the Love Canal emergency in Niagara Falls, N.Y., there has been a groundswell of public concern about the many known and unknown hazardous waste sites across the country. Responding to these legitimate concerns, U.S. EPA requested that its 10 regional offices provide data for a national survey of hazardous waste sites.

This was a difficult task for the regional offices. In Region V, industry has been producing and disposing of hazardous wastes for many years. EPA can only begin to estimate the number of unrecorded sites that may have been used, covered up, and long since forgotten.

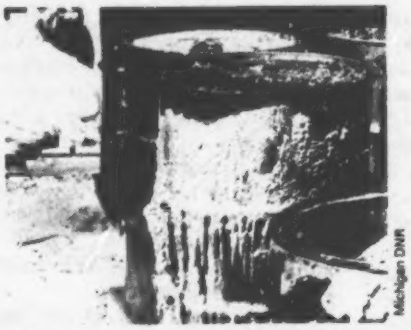
EPA Administrator Douglas Costle has said that "thirty to forty million tons of hazardous waste are being produced each year. We estimate that 80 to 90 percent is being disposed of in ways which will not meet forthcoming standards."

On November 21, EPA issued the results of its survey of hazardous waste disposal sites across the country. Region V's preliminary estimate indicated that there may be as many as 1,800 sites in the Region that contain unknown quantities of hazardous waste. These are sites that may not at present be dangerous but which could at some future date become a threat to public health or the environment.

Region V listed 22 sites in its six states as specific samples for the EPA survey. In a statement accompanying the release of the survey, Costle said that "these are the sites on which we have the most information; they are not necessarily the most dangerous sites. Indeed, some have been cleaned up and others are under litigation." Costle added, "We are continuing to work with the States and localities in monitoring these sites."

To follow up this national effort, Region V Administrator John McGuire has established an in-house task force to work with State pollution agencies in evaluating the 22 sites sampled in the survey. "Our first effort will be to look at those sites that are the most serious to determine what additional action the States or EPA might take," McGuire said.

According to Karl Klepitsch, chief of the Waste Management Branch at the regional office and head of the task force, "By dealing first with these specific sites, EPA Region V plans to establish a routine, joint process with the States for analyzing such sites in the future."



Michigan DNR

Federal responsibility in Hazardous Waste Management is based on the Resource Conservation and Recovery Act of 1976 (RCRA). Because of the technical complexity and the controversial nature of hazardous waste issues, coupled with EPA's commitment to public participation in its rule-making process, there was some delay in the promulgation of the hazardous waste regulations. But on December 12, Costle proposed a system of regulations to ensure that hazardous wastes are dealt with properly in the U.S.

Until these proposed regulations finally become law, EPA can only act if an "imminent or substantial" danger to the public health or the environment exists. Region V is presently working with the States to develop interim procedures to handle hazardous waste site problems as they occur.

RCRA will control hazardous wastes "from cradle to grave." The proposed regulations outline a comprehensive system that will regulate the wastes from their creation, through their transporting, and to their final disposal, in order to ensure that all such wastes are safely managed.

This program is intended by RCRA to be run by the States. To ensure that this happens, RCRA provides special funds to the States for these programs. However, if a State program does not meet certain minimum Federal requirements, or if a particular State does not wish to have such a program, U.S. EPA is required by law to run a program within that State.

Klepitsch said: "We have had either oral or written commitments from the six Region V States, up to and including letters from the governors of some States, seeking authorization for their hazardous waste program."

Every effort is being made at the Federal, State, and local government levels to ensure that the Love Canal drama is not re-enacted in Region V.

U.S. EPA HAZARDOUS WASTE DISPOSAL SITE SURVEY

	*Estimate of sites that may contain any amount of hazardous waste	Known sites with significant quantities of hazardous waste	Sample sites on which information supplied to was EPA survey
Region V (IL, IN, MI, MN, OH, WI)	1,800	UNKNOWN	**22
National Total	32,254	638	103

*The number of sites that may contain hazardous waste is a regional office estimate and does not reflect actual information on the sites.

**The sites identified in Region V are located in the following States (none has been identified in Wisconsin):

ILLINOIS: Byron, West Chicago, rural Winnebago County (west of Rockford).
INDIANA: East Chicago, Gary, Kingsbury, just SW of Seymour.
MICHIGAN: Montcalm County, St. Louis, Montague, Dalton Township, Muskegon County.
MINNESOTA: Duluth, Perham, Anoka County, Shakopee, St. Louis Park, Winona, Woodbury Village.
OHIO: Oak Hill, Garfton, Portage County.

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Shipping Hazardous Wastes

By Susan Nelson

The first conference on the transportation of hazardous materials in the Great Lakes region was held Oct. 18 and 19 by the Great Lakes Basin Commission. The U.S. EPA, U.S. Department of Transportation, Illinois DOT, and Illinois EPA were cosponsors.

Some 60 participants, representing transportation as well as environmental interests, met in Chicago to deal with the problems caused by the increase in the shipping of hazardous substances (Last year, four billion tons of hazardous materials were moved throughout the nation.) The following problems were discussed and recommendations were generated:

- *Current policy and regulation.* Existing regulations are both complex and inconsistent, and shippers and manufacturers have a hard time keeping up with new regulations. There are gaps in the regulations; some materials are covered, some are not. The transportation of certain toxic substances that are known to accumulate in biological organisms is not necessarily regulated. A simplification of regulations seems advisable.
- *Contingency planning.* The conference dealt with the need for establishing clearer responsibility in cleanup operations, where there is now confusion between environmental and transportation agencies. It was recommended that all parties be involved in planning and emergency response efforts, and that consideration be given to establishing a central emergency control system.
- *Enforcement.* More adequate information on shipping routes and volumes of materials is needed, as are more and better-trained enforcement personnel. It was recommended that States be the primary enforcement arms, even if they are following Federal guidelines.
- *Monitoring systems and record-keeping.* No regional or national system exists for determining what and how much of a hazardous material is being moved where and by what means. There is usually no coordination between agencies. It was recommended that all such data be collected and made available to all State and Federal agencies for enforcement and planning.

The Great Lakes Basin Commission (GLBC) will circulate a draft of its recommendations to all members of its standing committee on transportation. The Commission will act upon final resolutions, which will be drawn from those recommendations.

Copies of summary proceedings of the October conference, including discussions and recommendations, will be available in January from GLBC, 3475 Plymouth Rd., P.O. Box 999, Ann Arbor, MI 48106 (phone 313-668-2300).

A Reading List On Toxics

Two free government publications on toxics may be ordered from the Office of Public Affairs, U.S. EPA Region V, 230 S. Dearborn St., Chicago, IL 60604:

The Toxic Substances Control Act (TSCA) — a 12-page booklet on the background, scope, and administration of the 1976 law.

Highlights of TSCA — a very brief summary of the law's scope and provisions.

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Copies of Public Law 94-469 (TSCA) are available from EPA's Office of Industry Assistance in Washington. So too are the latest regulations on toxics and Federal Register notices, including those that pertain to PCBs and CFCs. The same office also has a supply of *Where We Stand*, a new pamphlet on how the Office of Toxic Substances is implementing TSCA. To receive copies of TSCA or any of the publications; for information on reporting for the Chemical Substances Inventory; or to ask questions about, say, a chemical hazard and what EPA is doing about it, call the Office of Industry Assistance, toll-free, at 800-424-9065. Calls are answered Mondays through Fridays between 8:30 a.m. and 5 p.m., Eastern Standard Time.

• • • •

EPA pamphlets on solid wastes are available, including these: summaries of the Resource Conservation and Recovery Act (RCRA) of 1976; *RCRA: An Update;* a transcript of an October, 1978 speech on the law; and *Industrial Waste Exchanges,* a fact sheet and guide to information on hazardous waste recycling. To order these pamphlets or to find out about others that are available on solid wastes, write to Ed Cox, Solid Wastes Information, U.S. EPA, 26 W. St. Clair St., Cincinnati, OH 45268. Or call (513) 684-8401.

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Costle: Pollution Trade-Offs Can Save $

U.S. EPA Administrator Douglas M. Costle in late December proposed a new cost—cutting policy that would allow industry to decide, under certain circumstances, the best way to clean up emissions at individual plants, provided that overall air and water quality requirements are still met.

"This approach would not mean less pollution control," Costle said, "but less expensive pollution control. There's no point in making a company spend a dollar to control a pound of pollution, when the same job can be done differently for 50 cents a pound. We're proposing to let industry concentrate their cleanup dollars where they will do the most good.

"For example," Costle continued, "under this 'alternative approach,' if the owners of an auto paint shop decide it's more cost-effective to control hydrocarbon air pollution from the grease removal rather than from the painting operations, they could apply for State approval to reduce controls at the painting end in exchange for an equal increase in control at the degreasing end. The key consideration is that total emissions do not increase."

This is sometimes referred to as the "bubble concept," since the EPA would consider the plant's emission as an aggregate, as if the plant were in a bubble. EPA and States currently require that essentially identical amounts of control on each pollutant be attained at each pipe or smokestack in a plant.

"This new approach could save industry between 5 and 15 percent of the dollars they are planning to spend on pollution control— millions of dollars," Costle noted. "Since industry will be able to keep the savings from the development of new, cheaper, and better pollution control technology, costs should decline and the science of pollution control should advance."

Costle outlined the background on the development of the new policy: "This policy is the result of many months of work by an EPA Task Force created in response to President Carter's request that regulatory agencies find ways to reduce the burden of government regulations."

The Task Force found that EPA could offer the new pollution control approach, provided industry could meet certain basic conditions to safeguard human health and the environment.

These conditions would ensure that total pollution does not increase, that air and water quality standards are met, and that the new policy does not hamper or delay the enforcement of EPA and State pollution control requirements.

Industries likely to be interested in using EPA's new money-saving approach include automobile assembly plants, can coaters, steel mills, power plants, petroleum refineries, and chemical plants.

EPA is asking for 60 days of public comment on the alternative approach. If the approach is adopted, plants could begin applying to the States for permission to use it in air pollution control. During the next several years, industries could propose using the "trade-off" technique in water pollution control, as EPA and the States prepare a new round of permits to meet tougher water cleanup standards in 1984.

Persons interested in commenting on the alternative approach should send their remarks to EPA, Office of Planning and Management, 401 "M" Street SW, Washington, DC, 20460, Attention: Barbara Ingle, phone (202) 755-2811.

A notice on the new pollution control approach will appear soon in the Federal Register.

PEOPLE

Dr. Leslie P. Seyb, one of the original staff members of EPA's Corvallis, OR Environmental Research Laboratory, retired from Federal service on November 18. Since coming to Corvallis in 1964, Dr. Seyb has served in key supervisory posts at the Environmental Research Lab and helped establish the Pacific Northwest Water Laboratory. Dr. Seyb received his BA in chemistry from Coe College in Cedar Rapids, Iowa and MS and Ph.D degrees in organic chemistry from the State University of Iowa. He will continue to make his home in Corvallis.

H. Wallace Poston resigned December 4 as Chicago's chief of environmental protection. Mayor Michael Bilandic named **Thaddeus Kason**, Poston's top aide, to head up the newly created Department of Energy and Environmental Protection. Mayor Bilandic said, "Mr. Poston leaves Chicago's Department of Environmental Control with an excellent record. Our air quality has improved substantially under his direction." Poston cited a desire to spend more time with his family as his reason for leaving city government.

Enforcement Director for Region V, **James O. McDonald**, is leaving the EPA early in 1979 after eight years as one of the most effective of the Federal government's pollution fighters. McDonald is resigning rather than re-apply for his present job, which will be modified considerably by new Civil Service regulations. (See story, page two.)

Documerica

QUESTION: What do the following all have in common: the League of Women Voters; Elmhurst, Illinois; toilets that don't flush; and the impending civil war between New Mexico and Minnesota?

Conference Covers

Answer: They were all hot topics at the National Conference on Water Conservation and Municipal Wastewater Flow Reduction, held November 28 and 29 in Chicago. With water supplies declining steadily and water use in the U.S. running at 400,000,000,000 gallons a day and expected to double by 2000, it's small wonder that over 500 government leaders and concerned citizens were there to figure out what do do.

Not Just on Election Day

Hester McNulty smokes tiny cigars and talks tough, but she also uses some very subtle persuasion to spearhead the League of Women Voters' efforts to get public support for water conservation. McNulty doesn't have too much patience with those who think that the League of Women Voters doesn't do anything but usher voters in and out of the polling booth.

"A lot of people confuse our voter service educational activities with our other side, which is our action side... where Leagues all over the country study an issue...and decide what stands they're going to take on that issue."

Many groups became active in water conservation following the droughts and shortages of the mid-'70 s. Not so with the League. "We've been into water, as they say, since 1956. We were one of the very first groups to realize that water resources were a very, very important area that needed to be addressed by the League and by citizens as a whole. We feel that in the last few years we've really come into our own. Things we were urging 20 years ago are now taking place. So we're not newcomers to the water area—we've been there."

How does the League work to encourage public participation in such programs?

"At the national level, we've had a number of grants to go out and actively run public involvement programs All over the country, we've had the League involved in getting people out and interested in participating in planning programs, which really are going to determine the way of life for perhaps the next 20 years in the United States."

Cheering Up Your Toilet

"A leaking toilet is a sad toilet," said David Farrell. He should know, since he's the coordinator for the Illinois Interagency Water Management/Conservation Committee. These leaks can best be detected by placing a dye tablet or a few drops of food coloring in the toilet tank and then waiting a few hours (overnight if it doesn't cause undue hardship) to see if the coloring shows up in the toilet bowl.

If the colored water indicates a leaking toilet, just about anybody can make the necessary repairs to the stopper in the bottom of the tank. And Farrell does mean *anybody*.

"It seems to me that the toilet is the last great sexist object in our society. We let women clean the toilet bowl, but we never let them peek inside the tank at all the wonderful machinery. That's the last secret bastion of male chauvinism. The toilet goes on the blink and the wife calls the husband (who's at a convention in Duluth). and he yells, 'Don't touch the works in the tank! I'll catch the first flight home!' I don't think that's the way it should be. Women can easily go to the hardware store and get some simple instructions and repair a leaking toilet, thereby saving the loss of several thousand gallons of water."

One of the major problems encountered by a professional "toilet talker" such as David Farrell is that people aren't always willing to join the conversation. "Some people don't even like to say the word 'toilet,'" says Farrell. "They talk about 'bathrooms' or 'water closets.' But there's not always a bath in the 'bathroom.' And what's a 'half-bath?' I've never seen one. The last time I mentioned a 'water closet,' somebody tried to hang their scuba gear in it. We figured we just had to come right out and say it: 'Look folks, there's nothing to be embarrassed about, but the average American toilet uses 13,000 gallons of clean water every year to dispose of 165 pounds of human waste.' That's not a very wise use of clean water."

Farrell also points out that water dams can be purchased at hardware stores and fitted into the toilet tank, reducing the amount of water used each flush by as much as 50 percent.

Why Flush?

But if toilets that flush cause so many problems, how about toilets that don't flush? One such device is known as a composting toilet and David Del Porto, of ECOS, Inc., a Massachusetts-based environmental systems management firm which specializes in alternative utilities systems, had some interesting things to say about it. What's wrong with flush toilets anyway? Del Porto responded: "Flush toilets disrupt the water supply. They take fresh, clean water, pollute it, and transfer that polluted water to other areas, where it causes problems.

"It costs a great deal of money to take water from the aquifer, treat it to potable quality, use it, and clean it up again. Flush toilets aren't economical anymore. Besides, they're ecologically unsound."

But if we can't flush sewage away to waste treatment plants, what can we do with it? "There are alternatives now," said Del Porto "that cycle the nutrients in household garbage and in your own excrement that can be used productively, such as the compost toilet."

Del Porto then went on to describe what these toilets do. "They work on the natural principles of biological decomposition. We've all observed this sort of decomposition in our backyard: leaves falling on the ground, slowly decaying, becoming part of the earth. The compost toilet simply replicates that process, perhaps in your basement, in a tank, and produces humus from your own excrement and your household garbage. Humus is

The Water Fronts

By W. W. Reid

an earth-like substance that can be used for growing vegetables and plants in your own garden."

In effect, you wind up storing, and eventually converting to soil, all your own sewage right in your house. When asked if this arrangement causes any unpleasant odor in the home, Del Porto responded, "Not at all. The process is aerobic, rather than anaerobic. This means that air is used in the biologic decomposition of material and it is ventilated to the outside. All systems would stink to a certain extent, were they not ventilated. But as you know, if you have a pile of compost in your backyard, it smells like rich earth, and that's what your compost toilet system smells like as well."

What about accumulation problems? Without constant disposal, doesn't sewage rapidly build up? "Surprisingly not. The average ratio of decomposition in volume is about 95 percent reduction. You must bear in mind 95 percent of all that we are is water in the first place. Once that moisture has been converted to water vapor in the biological decomposition process, and ventilated, there's only a small percentage of useful, organic solids left." Such a system may sound complicated, expensive and difficult to install. "Not at all," said Del Porto. "Compared to the expense of installing and operating a flush toilet, it's a very simple, inexpensive system."

If composting toilets make so much sense, why do we have massive, centralized sewage treatment systems? "We became committed to the flush toilet 150 years ago. It seemed so convenient to flush it and forget it. We achieved that convenience at great cost. We didn't realize it at the time, but now we see that the capital costs for achieving our water quality goals are approaching a trillion dollars. We can ill afford such a system, even if it was the best thing at the time."

T-Shirts to the Rescue

The citizens of Elmhurst, Illinois found out they could't afford their water system, either. The city had been mining the local aquifer (using up the naturally occurring underground water storage) at a rate faster than it could be replenished. Deep wells were dropping alarmingly, about 14 feet a year. Because of legal restrictions placed on the use of Lake Michigan water, Elmhurst was forced to conserve or go without. Neil R. Fulton, Illinois Dept. of Transportation's Chief of the Bureau of Resource Management, described Elmhurst's strategy.

"The Elmhurst Water Conservation Program set goals of reducing water consumption by 10 to 15 percent and sewage treatment plant hydraulic loads by 8 to 10 percent." How did Elmhurst go about it? "Public education was a very important component of the program," Fulton said. "People were made aware of the problem and the solution." Changes were also made in water rates and plumbing codes.

There was also the retrofit program. "We hired 17 summer students and they went into the community wearing t-shirts that said 'Elmhurst Water Conservation Program,' on the front and 'Help Save water,' on the back. They delivered, and offered to install, free water displacement dams for all the toilets in Elmhurst. They were very well received."

The program worked well enough for Elmhurst to approach its water reduction goals in the first year.

Some significant dollar savings were also achieved, Fulton explained. "The program was financed out of utility funds and cost $45,000, about $1 per capita. In the first year the programs was implemented, we were able to remove from the budget an item for a new peaking well that would have cost $400,000. So the immediate savings were pretty impressive."

The Frostbelt Will Rise Again ....

If professor/prophet Evan Vlachos is correct, it will be just such shortages as those dealt with by Elmhurst that will eventually lead to civil war between Arizona and Minnesota.

The "Frostbelt" (Midwest and Northeast states) and the "Sunbelt" the South and Southwest) are both vying vigorously for limited energy and water resources. There isn't enough to go around and if both areas continue their present patterns of consumption, a potentially disastrous confrontation is inevitable, said Dr. Vlachos. The Sunbelt people persist in the attempt to recreate New England in the Arizona desert, complete with green lawns and bushy elms. The Frostbelt types have antiquated water and sewer systems that did the job in 1920, when they were built, but which are now potential or actual disasters.

Dr. Vlachos said people writing and talking about the future these days conveniently divide into two groups: Cassandras and Pollyannas. Pollyannas are either convinced that water and energy crises are unreal and unlikely to be a problem in the future or that modern technology will be able to rescue society as it seems to have done so often in the past. The Cassandras feel that the crises will become more frequent and more serious and will lead not to a changed society that will learn to avoid crises, but to a general society-rending disaster.

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Environmental news briefs...briefs...briefs briefs...

EPA/Bob Nagel

EPA, Interior Join Forces

Barbara Blum, Deputy Administrator of U.S. EPA, and James Joseph, Undersecretary of the Department of the Interior, announced in Chicago in November a new interagency agreement that can both clean — and green — America's inner cities.

The new plan will work like this: When EPA becomes involved in funding, say, a sewage treatment plant or the cleanup of a river, Interior will be able to use a portion of the land involved for a park, beach, or other recreational use.

Blum and Joseph were keynote speakers at a three-day conference sponsored by the two agencies and made their announcement in conjunction with that event. In attendance were water and recreation experts and city planners from across the country. Welcoming remarks were delivered by John McGuire, Regional Administrator of U.S. EPA Region V.

EPA Oversees 24 Toxics

U.S. EPA has announced plans to coordinate efforts with three other Government agencies to regulate 24 toxic substances that pose health or environmental threats.

Douglas Costle, EPA Administrator, said the joint effort would be aimed at minimizing the risk of the substances while not unduly restricting their beneficial use.

"For example," Costle said, "our goal in controlling asbestos is not to halt essential uses, such as fireproofing material, but to ensure that these can be done in ways that don't jeopardize people's health or environmental quality."

In addition to EPA, the agencies involved are the Consumer Product Safety Commission, FDA, and OSHA.

The 24 substances are acrylonitrile, arsenic, asbestos, benzene, beryllium, cadmium, chlorinated solvents, chlorofluorocarbons, chromates, coke oven emissions, diethylstlbestrol(DES), dibromochloropropane (DBCP), ehtylene dibromide, ehtylene oxide, lead, mercury, nirosamines, ozone, polybrominated biphenyls (PBBs), polychlorinated biphenyls (PCBs), radiation, sulphur dioxide, vinyl chloride, and toxic waste disposals.

Wisconsin Plants Clean Up

An unannounced inspection of 16 major industrial firms in Wisconsin last summer found 11 to be in basic compliance with the self-monitoring requirements of the Clean Water Act. James O. McDonald, EPA Region V enforcement director, called the result, "an encouraging trend."

Four firms were found to be in violation but have since corrected their procedures. The one remaining violator is still under study.

An inspection of 12 companies in Wisconsin in the fall of 1977 had turned up a larger number of procedural violations.

Food Additive Cuts SO_2

An inexpensive and commonly used food additive, adipic acid, may soon play a big role in reduction of sulfur dioxide emissions from coal-fired power plants.

Scientists from U.S. EPA's Industrial Environmental Research Lab (IERL) have injected the additive into wet-scrubber solutions in tests and have achieved significant improvement in sulfur dioxide removal.

A wet-scrubber is an air pollution control device that uses a spray of water and chemicals to trap and remove pollutants from the exhaust gases of power plants and other industrial operations that burn fossil fuels.

Michael A. Maxwell, Chief of IERL's Emissions/Effluent Technology Branch, said that, "In one test, the addition of 1,500 parts per million of adipic acid increased sulfur dioxide removal from 70 up to 95 percent. Although our initial successes with adipic acid leave us quite optimistic, more testing and economic analysis must be made before we can fully evaluate this promising concept."

The evaluation is taking place at an EPA wet-scrubbing facility at the Tennessee Valley Authority's Shawnee Steam Plant in Paducah, Kentucky.

New MPG Ads

The Federal Trade Commission has announced that auto makers will be required to use the new combined miles-per-gallon EPA estimate figure in advertisements making fuel economy claims.

This year U.S. EPA adopted a combined statistic designed to more closely estimate what motorists actually get from their new cars, instead of requiring labels giving separate "city" and "highway" mileage figures.

Until this restriction was announced by the FTC, auto companies could continue to use the old figures, which had been often found to overstate the actual mileage.

The FTC requirement will be effective 30 days after publication in the Federal Register.

Pollution Control Sales Double

Sales by companies making air and water pollution control equipment will nearly double by 1983, to $3.5 billion a year, predicted a study recently released by U.S. EPA.

The study also says makers of pollution control equipment will employ 43,900 people in 1983, up from 35,850 in 1977. The report puts 1977 sales at $1.8 billion. The study includes materials used in sewage treatment plants, but not equipment used in motor vehicles.

The profits of makers of pollution control equipment don't seem to be higher than most manufacturing industries, according to the study. "Although sales have grown rapidly, profitability as measured by return on investment was found to be about average compared to industrial segments," U.S. EPA Administrator Douglas Costle said.

"This study is valuable to EPA because it evaluates the capability of the industry to meet pollution control needs of the future," Costle concluded.

Chrysler, EPA in Court

Chrysler Corp. has lost a court bid to block the U.S. EPA from changing certain pollution control testing procedures, but the suit may be reinstituted if additional EPA advisory circulars issued in the next few weeks cause Chrysler any damage.

Chrysler had sought a preliminary injunction and a temporary restraining order to bar the EPA from making any changes in the emissions test procedures on standards for Chrysler's 1980 model cars and trucks from those in effect last July 1.

The auto company has complained that "changing test rules in the middle of the game" has caused their emissions testing program to fall five weeks behind schedule.

SO₂ Cuts Farm Yield

Sulfur dioxide has been found to have significant adverse effect on valuable farm crops at levels far below those considered acceptable by the U.S. EPA, according to a study by Argonne National Laboratory in DuPage Co., Illinois. Sulfur dioxide is a major air pollutant caused chiefly by burning coal, and it affects the photosynthesis process of plants.

The study was undertaken because of President Carter's program to shift the nation's energy reliance from foreign oil to domestic coal and to determine the impact increased coal burning might have on crops. It is estimated that Carter's plan would increase coal consumption by 60 to 70 percent by 1985.

The largest of its kind ever conducted, the study involved fields of Illinois soybeans exposed to varying amounts of sulfur dioxide during the 1977 and 1978 growing seasons.

EPA standards prohibit sulfur dioxide levels from exceeding 500 parts-per-billion (ppb) over a three hour period more than once a year, but at 353 ppb, it was found that the soybean yield dropped 15 percent. In addition, the plants yellowed noticeably. At 786 ppb, the crop was reduced by as much as 63 percent.

Home Pesticides to be Kid-Proof

By early next year, U.S. EPA will issue new rules requiring special child-resistant packaging for the most toxic household pesticides.

Steven Jellinek, Assistant Administrator for Toxic Substances, noted in a speech before the Society for Occupational and Environmental Health, in Washington, DC, that "according to the National Clearinghouse for Poison Control Statistics, some 6,500 American children under 5 years of age were accidentally poisoned in 1975 by ingesting pesticides...and this number has been going up annually....

"The packaging requirements will affect those products that pose the greatest hazard to children, with a small increase in cost to the consumer of about 4 cents per package."

At the same time, Jellinek announced that 14 pesticide ingredients used in about 1,000 agricultural products are being restricted to use by trained and certified applicators only. The ingredients are carbofuran, chlorfenvinphos, clonitralid, dioxathion, disulfoton, endosulfan, ethoprop, fenamiphos, fensuliothion, fonofos, monocrotophos, phorate, phosacetim, and phosphamidon.

Chrysler Recall

U.S. EPA Administrator Douglas Costle ruled that Chrysler Corp. must recall about 208,000 autos with 360 cubic inch or 400 cubic inch engines. The cars affected are Chrysler Cordoba and Newport; Plymouth Fury and Grand Fury; and Dodge Monaco, Charger SE, and Coronet.

That ruling came after Chrysler appealed the original EPA recall order of December, 1976, which was prompted by improper design and adjustment procedures that caused excessive carbon monoxide emissions.

This is the first recall to involve design failure rather than breakdown of emission control systems. This is also the first time an automaker has appealed a recall order.

Chrysler still has the option of taking the appeal of the recall order to court.

Rule on Gas Tank Vapors

A ruling is expected soon from U.S. EPA that would require motor vehicles to have devices to control the polluting vapors that escape from gas tanks during fill-ups. These vapors are estimated to constitute about two percent of the overall hydrocarbon emissions in a typical urban area.

Regulations issued under the 1970 Clean Air Act placed responsibility on station owners for controlling gas tank vapors. The deadline for installation of equipment is January 1, 1980.

The oil industry objected to the investment of $8,000 to $12,000 required for each station and claimed that the equipment would be inconvenient and would malfunction frequently. Congress ordered EPA last year to postpone the 1980 compliance deadline and to "consider the desirability and feasibility of on-board systems."

The cost per vehicle for vapor control devices would be approximately $10, the American Petroleum Institute estimates.

One drawback of the on-board (or vehicle-mounted) system is that, based on a national fleet turnover of about 10% annually, it would take 10 years before all autos came under compliance.

Dow on Poisons: "No Problem"

Discharge from Dow Chemical plants is "the major source — if not the only source" of TCDD contamination found in at least three Michigan rivers, said an EPA report.

An earlier study of the Tittabawassee River had found TCDD, a highly poisonous dioxin linked to birth defects and liver and nerve damage. It also had warned against eating fish from that river, as well as from the Chippawa and Saginaw rivers.

Dow claimed, that its research indicates that "dioxins have been with us since the advent of fire" and could be found everywhere because of incineration of all kinds.

Detroit Sewer Plant Monitored

A Federal judge in Detroit has appointed University of Michigan engineering professor Jonathan Bulkley to monitor, evaluate, and make recommendations on the operation of the Detroit Sewage Treatment Plant. The plant's discharge into the Detroit River exceeds by four times the court's limitations on contaminants.

Bulkley's report is expected December 30th. Hearings will then be held so that additional facts may be presented by EPA and the city. The judge, John Feikens, is expected to set forth a comprehensive plan for the management of the plant sometime in February.

Because of the problems at the plant, Detroit is currently the single worst polluter of Lake Erie.

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FEDERAL REGISTER

October 25, 1978 - **Rules:** Environmental impact statements, preparation of: Water quality management program. **Proposed Rules:** Air quality implementation plans; delayed compliance orders: Colorado. **Notice:** Environmental statements; availability, etc.: Agency statements, weekly receipts. Meetings: Drinking Water National Advisory Council. Pesticides; tolerances, registration, etc.: Glyphosate.

October 28, 1978 — Proposed Rules: Air quality implementation plans; delayed compliance orders: Indiana. Kentucky. **Notices:** Pesticides; tolerances, registration, etc.: Dibromochloropropane (DBCP). Toxic and hazardous substances control: Polycholorinated Biphenyls (PCBs); approved disposal facilities, list. TSCA Interagency Testing Committee recommendations; response. TSCA Interagency Testing Committee report to EPA; availability and inquiry. Water pollution control; effluent guidelines for certain point source categories: Best conventional pollutant control technology; variance clauses interpetations withdrawal. **October 31, 1978 — Rules:** Air quality implementation plans; delayed compliance orders: Washington (2 documents). **Notices:** Air pollution; ambient air monitoring reference and equivalent methods applications, etc.: Sulfur dioxide analyzer, etc. Meetings: Science Advisory Board. **November 1, 1978 — Rules:** Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: Oxytetracycline. Toxic substances: Polychlorinated Biphenyls (PCBs); procedural rules, interim: **Propoeed Rules:** Air quality implementation plans; delayed compliance orders; Nevada. **Notices:** Environmental statements; availability, etc.: Agency statements, weekly receipts. Pesticides; tolerances, registration, etc.: Dinitro Technical and Ancrack Herbicide. **November 2, 1978 — Rules:** Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: O,O-Dimethyl S-((4-oxo-1,2,3-benzotriazin 3(4H)-yimethyl)) phosphorodithioate **Proposed Rules:** Air quality implementation plans; delayed compliance orders: Washington. **Notices:** Feed additive petitions: N-phenyl-N'-1,2,3-thiadiazol-5-ylurea and its aniline-containing metabolites. Improving Government regulations; regulatory agenda publication date. Pesticide and food additive petitions: Propanil, etc. Pesticides; tolerances, registration, petitions, etc.: O,O-Dimethyl O-((4-nitrom-tolyl phosphorothioate, etc. Petitions, etc.: Endrin.

November 3, 1978 — Rules: Air programs; approval and promulgation; State plans for designated facilities and pollutants. Air quality implementation plans; approval and promulgation; various States, etc.: Wyoming; correction. **Notices:** Pesticides; tolerances, registration, petitions, etc.: Methomyl. Permethrin. **November 6, 1978 — Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: California. **Proposed Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: Alabama. **Notices:** Environmental statements, availability, etc.: Agency statements, weekly receipts. Pesticides; tolerances, registration, petitions, etc.: Restricted use products; cancellation. **November 7, 1978 — Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: California (11 documents). Air quality implementation plans; delayed compliance orders: Iowa (2 documents). 51782, Washington. **Proposed Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: Utah; extension of comment period. **Notices:** Air quality implementation plans; approval and promulgation: Ohio, coal burning power plants; report availability. **November 8, 1978 — Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: Oklahoma. Air quality implementation plans; delayed compliance orders: Maine. Ohio. Pesticide programs: Packaging guidelines; notification to Agriculture Secretary. **Proposed Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: Maryland. **November 9, 1978 — Rules:** Air programs; approval and promulgation; State plans for designated facilities and pollutants: Texas. Air quality implementation plans; approval and promulgation; various States, etc.: California. West Virginia. Air quality implementation plans; delayed compliance orders: Iowa (2 documents). 52241. **Proposed Rules:** Air quality implementation plans; delayed compliance orders: Iowa. **Notices:** Meetings: FIFRA Scientific Advisory Panel. State FIFRA Issues Research and Evaluation Group. Pesticides; specific exemptions and experimental use permits: ICI Americas, Inc. et al. Pesticides; tolerances, registration, petitions, etc.: Prodiamine. **November 13, 1978 — Rules:** Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: CIPC. **Proposed Rules:** Air quality implementation plans; delayed compliance orders: Washington. **Notices:** Pesticides; tolerances, registration, petitions, etc.: Paranitrophenol. Permethrin (Ambush). **November 14, 1978 — Rules:** Air pollution control, new motor vehicles and engines, etc.: Technical amendments. Air quality implementation plans; approval and promulgation; various States, etc.: California. Air quality implementation plans; delayed compliance orders: Idaho. Indiana. Ohio. **Proposed Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: Massachusetts. Air quality implementation plans; delayed compliance orders: Connecticut. Maine. New York. Washington. **Notices:** Environmental statements; avilability, etc.: Agency statements, weekly receipts. Meetings: Administrator's Toxic Substances Advisory Committee. **November 15, 1978 — Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: Arizona. California. Air quality implementation plans; delayed compliance orders: Ohio. **Notices:** Food additive petitions: 2-Chloro-1-(3-ethoxy-4-nitrophenoxy)-4-(trifluoromethyl) benezine. Meetings: Environmental Health Advisory Committee. Radioactive wastes, environmental protection criteria for; inquiry. Water pollution control: Safe drinking water; review of variances and exemptions. Secondary treatment information; wastewater treatment ponds suspended solids limitations. **November 16, 1978 — Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: Wisconsin. **Proposed Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: Massachusetts. Air quality implementation plans; enforcement by State and Federal governments after statutory deadlines: Maine; withdrawal of notice of proposed rulemaking. **Notices:** Meetings: Municipal Construction Division Management Advisory Group. Wetlands solid waste disposal facilities. **November 17, 1978 — Notices:** Meetings: Science Advisory Board. Pesticide chemicals; tolerances, exemptions, petitions, etc.: Triallate (S-(2,3,3-trichloroallyl)) diisopropylthiocarbonate. Toxic and hazardous substances control: Business information, confidential; security manual, availability. Water pollution control; safe drinking water; public water systems designations: South Caroline. **November 20, 1978 — Rules:** Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: Carbaryl. Tricyclazole. **Notices:** Environmental statements; availability, etc.: Agency statements, weekly receipts. Pesticides; tolerances, registration, etc.: Tricyclazole. **November 21, 1978 — Rules:** Air programs; energy-related authority: Florida. Air quality implementation plans; approval and promulgation; various States, etc.: West Virginia; correction. **Proposed Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: New Jersey. Air quality implementation plans; delayed compliance orders: Guam. Indiana. Iowa. Nebraska. Ohio (2 documents). **November 21, 1978 — Notices:** Pesticides; tolerances, registration, petitions, etc.: Arsenic, inorganic; extension of time. 5-Chloro-3-methyl-4-nitro-1H-pyrazole. Coal tar, creosote, and coal tar neutral oils; extension of time. N-(mercaptomethyl) phthalimide S-(O,O-dimethyl phosphorodithioate. Pentochiorophenol; extension of time. **November 22, 1978 — Rules:** Air quality implementation plans; delayed compliance orders: New Jersey. **Notices:** Pesticide application; "low volume" and "ultra-low volume" method; inquiry. **November 24, 1978 — Proposed Rules:** Air pollution; standards of performance for new stationary sources: Electric utility steam generating units; extension of time. Air quality control regions; criteria and control techniques: Attainment status designations; extension of time. **Notices:** Food additive petitions: Baygon. Bendiocarb. **November 27, 1978 — Rules:** Toxic substances: Chlorofluoroalkanes, fully halogenated, used in aerosol propellants; manufacturing, processing, and distribution; clarification. **Proposed Rules:** Air pollution; standards of performance for new stationary sources: Electric utility steam generating units; correction. **Notices:** Committees; establishment, renewals, terminations, etc.: Municipal Construction Division Management Advisory Group. Environmental statements; availability, etc.: Agency statements, weekly receipts. Pesticide registration applications. Pesticides; tolerances, registration, petitions, etc.: 2,4,5-Trichlorophenol and salts; correction. Water pollution control: Secondary treatment information; wastewater treatment ponds suspended solids limitations; correction.

November 28, 1978 — Rules: Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: Inert ingredients. Thiabendazole. **Proposed Rules:** Air quality implementation plans; delayed compliance orders: Illinois. Tennessee. **Notices:** Pesticide applicator certification and interim certification; State plans: Wisconsin. Pesticides; tolerances, registration, petitions, etc.: 5-Chloro-3-methyl-4-nitro-1*h*-pyrazole. Propylene. Sodium chlorate.

CONSTRUCTION GRANTS

Applicant	Date	Award Amount
ILLINOIS		
Ridge Farm	11-3	$ 4,800
Shelbyville	11-21	5,400
Beecher	11-16	27,525
Forrest	11-16	7,725
Havana	11-16	42,150
Stockton	11-3	33
Waukegan	11-17	108,000
Galveston	11-16	6,450
Warsaw	11-24	65,475
Charleston	11-22	15,000
MICHIGAN		
Leighton	11-3	6,525
Highland Park	11-7	57,825
Mackinac Island	11-1	14,625
Sturgis	11-16	73,425
Unionville	11-8	55,425
St. Clair County	11-21	150,450
Lenawee County	11-28	8,441,775
Calhoun County	11-28	5,077,500
Holland	11-1	603,750
Muskegon	11-28	1,513,543
South Lyon	11-28	834,600
Clarksville	11-17	1,217,250
Clinton County	11-14	443,850
Acme	11-6	309,750
Oakland County	11-30	2,739,150
Genessee County	11-30	176,300
Bay County	11-30	1,034,175
Oakland County	11-30	$ 285,050
Alpena County	11-15	3,610,725
Detroit	11-30	1,541,475
Kent City	11-21	663,750
Ionia County	11-17	1,217,250
Bruce	11-8	256,950
MINNESOTA		
Marietta	11-22	8,400
OHIO		
Cleveland Sewer Dist.	11-28	22,575
Rock Creek	11-14	8,400
Dublin	11-14	78,825
Cleveland Sewer Dist.	11-28	21,750
Ft. Loramie	11-20	96,825
Laurelville	11-20	3,750
Carroll County	11-14	2,038,050
Salineville	11-14	1,671,825
Canal Fulton	11-2	18,300
Clumbiana County	11-17	5,325
Napoleon	11-17	19,800
WISCONSIN		
Manawa	11-2	3,825
Hazel Green	11-17	18,000
Columbus	11-7	51,600
Watertown	11-8	61,287
Union Grove	11-9	45,450

1979 calendar

APRIL 2-5

NOISEXPO '79, the National Noise and Vibration Control Conference and Exhibition, will meet at the Hyatt Regency O'Hare, Chicago, Il. this spring. The session will be sponsored by Sound and Vibration Magazine. Conference program coordinator Jack Mowry, is asking for papers that would be presented in April to be submitted to him as soon as possible. For further information, contact Mr. Mowry at: NOISEXPO '79, 27101 E. Oviatt Rd., Bay Village, OH, 44140.

JANUARY 9-11, 17-19, 30-February 1

University of Minnesota Agricultural Extension Service, Home Sewage Treatment Workshops. Jan. 9-11 at Owatonna MN, 17-19 at Anoda MN, Jan. 30-Feb. 1 at Inver Grove Heights MN. Legal and technical issues involved in individual sewage treatment systems; alternatives to centralized waste treatment.

FEBRUARY 7-9

Three days of public hearings on Hazardous Waste Control regulations proposed by U.S. EPA and listed in the Federal Register, December 18, 1978. In the Breckenridge Pavilion Hotel, St. Louis, MO. Persons wishing to present statements should give written notice at least two days before the hearing to Gerri Wyer, Public Participation Officer, Office of Solid Waste (WH-562), Environmental Protection Agency, Washington, DC 20460.

February--March

"Decisions for Lake Michigan" a course available in the southern Lake Michigan shore area will be offered at a time to be determined in February or March. The course will consist of ten 4-hour sessions at: Benton Harbor, MI (Lake Michigan College Campus); Chicago, IL (DePaul Univ.); Green Bay, WI (Univ. of Wisconsin); Hammond, IN (Purdue Univ., Calumet Campus). Contact Richard L. Robbins, (312) 427-5121, before January 15, for registration information.

OFF THE PRESS

Measuring Air Quality: The New Pollutant Standards Index — The EPA, in cooperation with other agencies, has developed a uniform Pollutant Standards Index to simplify pollution reporting across the country. Pamphlets describing the new PSI are available from Region V's Office of Public Affairs.

Unleaded Gas . . . The Way to Go — Questions and answers on unleaded gasoline, your car, and the law. Limited quantities from Region V, Office of Public Affairs.

1979 Gas Mileage Guide — Relative fuel economy performance of 1979 cars, station wagons, and light trucks. Limited quantities, Region V, Office of Public Affairs.

E I S COMMENTS

November 22, 1978 to
December 5, 1978

Sponsoring Agency Project Number Type of EIS	Project Location	Description	Summary of Comments	Comment Date
Federal Highway Admin. DS–FHW–F40085–WI (Draft Supplement)	Brown County, WI	Highway Improvements; University Ave, Cedar St. to Humboldt Rd, Green Bay	Implement mitigative measures for noise	11-22
Corps of Engineers F–COE–F32060–MI (Final)	Great Lakes	Demonstration navigation season extension program	Need prior concurrence of NY state re: St. Lawrence River, therefore should be excluded	11-20
Federal Highway Admin. F–FHW–FY0099–MI	Tuscalo County, MI	M-24 from Caro to M-25 at Unionville	Propose implementation of mitigation for noise	11-15
GSA F–GSA–F81016–MI (Final)	Wayne County, Detroit, MI	Courthouse Construction	Previous comments adequately addressed	11-29
Federal Highway Admin. F–FHW–F40100–MN (Final)	Scott County, MN	Highway Construction; Shakopee Bypass	Draft comments adequately addressed	12-5
Federal Highway Admin. F–FHW–F53006–IN (Final)	Goshen, Elkhart County, IN	Railroad grade separation	Draft comments adequately addressed	12-5

All Region V EIS Comments are prepared by the Office of Federal Activities, Environmental Impact Review Staff. For more information contact Barb Taylor at (312) 353-2307, U.S. EPA, Region V, 230 S. Dearborne St., Chicago, 60604.

NEGATIVE DECLARATIONS

Each issue of ENVIRONMENT MIDWEST carries a list of "negative declarations" that EPA has issued in the recent past for sewage treatment projects to be funded within the Region by the Agency.

A negative declaration is a notification to the public, prior to the grant award, that EPA believes the project's environmental impacts are not significant and that, as a result, an Environmental Impact Statement is not needed.

If you have comments or questions regarding the above projects, contact Gene F. Wojcik, Chief, EIS Preparation Section, at the Region V offices in Chicago (312)353-2157.

Project Location	Estimated Project Cost	Potential EPA Share
Erie County, OH	Design $785,755 Construction $6,853,400	Design $587,104 Construction $5,140,050
Ross County, OH	$50,684	$38,013

ENVIRONMENT MIDWEST
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Region V
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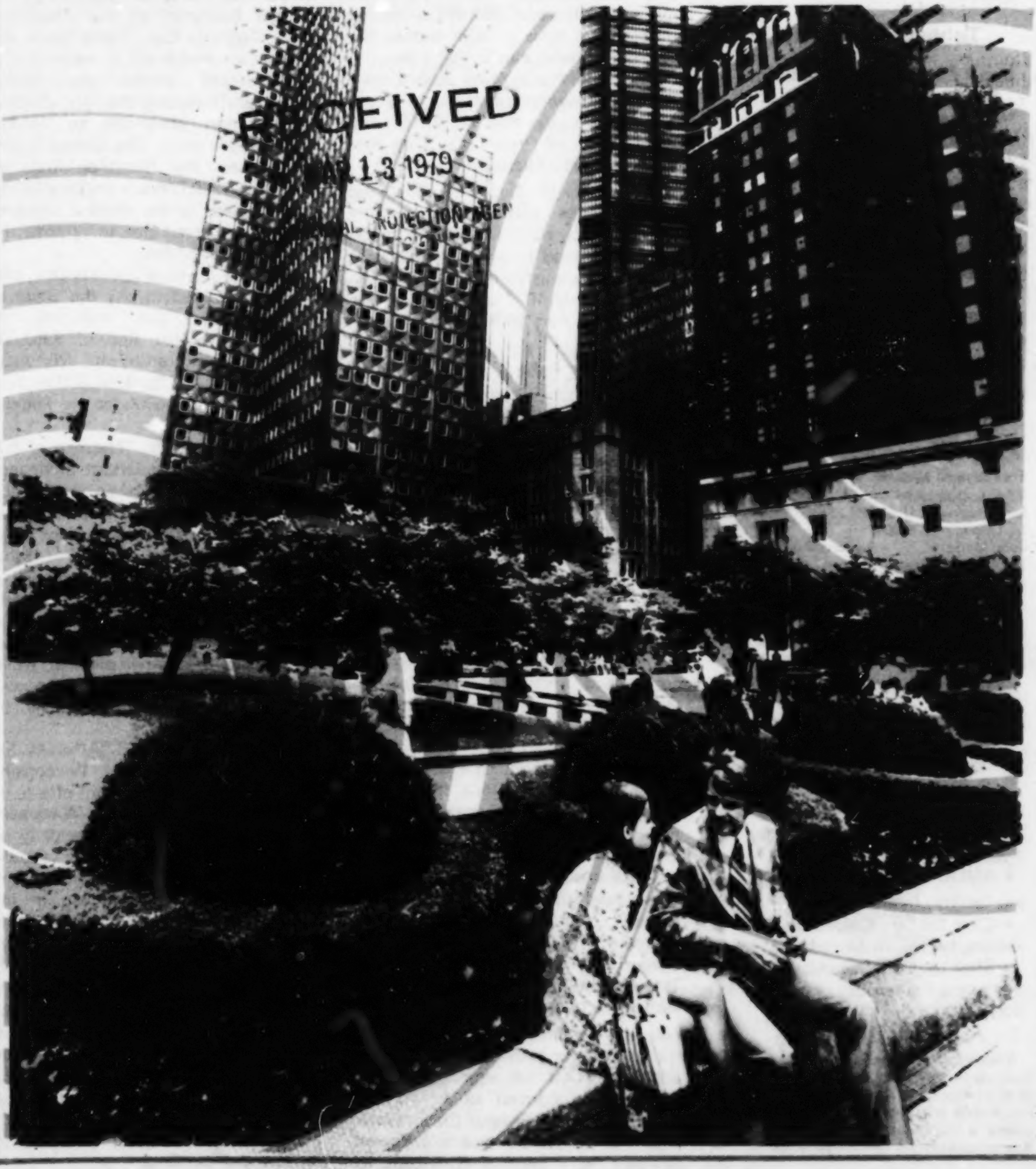
February, 1979

EPA

ENVIRONMENT MIDWEST

Electromagnetic Radiation: How Dangerous?

Story on page 8



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EPA ENVIRONMENT MIDWEST

On The Cover:

Microwave radiation from a wide variety of sources surrounds all of us. Experts disagree on how dangerous these invisible unfelt beams may be to the general public.

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John McGuire.......Regional Administrator
Val Adamkus Deputy Regional Administrator
Frank Corrado.......Public Affairs Director
W.W. Reid......................Editor
Nancy McKinney..................Briefs

NOV's

- Mobile Oil Co., Hammond, IN, storage and loading facility hydrocarbons.
- AMOCO, Aurora, OH, loading facility, hydrocarbons.
- Clark Oil Co., Columbus, OH, loading facility, hydrocarbons.
- Shell Oil Co., Cleveland, OH, marketing terminal, hydrocarbons.

A Notice of Violation is an official warning from the Federal EPA that a source is in violation of existing air regulations. The polluter has 30 days from the notification date to negotiate a compliance schedule before the Agency seeks civil or criminal penalties.

Scott Paper Pays $1 Million In Wisconsin Suit

A million dollars in pollution control fines, in settlement of numerous civil and criminal violations, was agreed to January 5 by the Scott Paper Company in Wisconsin.

In a unique settlement of Federal and State of Wisconsin actions, the company will place $600,000 of the fine into a trust fund to help restore the environmental quality in that State.

The Federal and State actions were initiated following the closing of one of Scott's two pulp mills on the Oconto River, north of Green Bay. That river flows into Lake Michigan.

According to the U.S. EPA, the Federal fines constitute a penalty approximately equal to the amount the company saved by allowing the plant to discharge wastes during the period from the July 1977 cleanup deadline through February 1978.

Wisconsin Attorney General Bronson La Follette, U.S. Attorney Joan F. Kessler, Region V of the U.S. EPA, and the Wisconsin Department of Natural Resources announced the settlement.

Joel A. Mintz, enforcement attorney for EPA in the case, told of several results of the suit that were not measured solely in dollars.

"One outcome of the case we're very pleased with is the fact that there have been a number of environmental improvements that have resulted from Scott Paper Company's coming into compliance. For instance, in the Oconto River, which was the river adjoining Scott's plant, there was a dramatic improvement in water quality and fish life once the Oconto Falls mill complied with regulations. In addition, there's been an improved clarity of river water, a decrease in slime deposits, and a decrease in objectionable odors near the plant."

The total settlement, both State and Federal, requires Scott to make payment of $1 million to the United States and the State of Wisconsin. This constitutes the largest monetary settlement of any air or water pollution case in Wisconsin history and one of the largest ever in the United States. In addition, Scott has agreed to enter pleas of no contest to 10 criminal violations of the Federal Clean Water Act. The no-contest plea is expected to result in a criminal conviction of Scott Paper Company. This will be one of the first such convictions of a water polluter under this particular Federal statute.

As part of the Federal settlement, $250,000 will be paid by Scott into a special trust fund to be administered by the Secretary of the Wisconsin DNR, Anthony Earl. These funds will be used for the benefit of water quality improvement within the State, specifically including the area affected by pollution attributed to Scott's Oconto Falls plant. The United States will request that Scott be fined an additional $250,000 as a result of its no-contest pleas to the criminal charges. Scott has agreed not to oppose the imposition of the fine.

Attorney General La Follette said Scott is required to pay the State of Wisconsin a civil forfeiture of $150,000. Another fine of $350,000 will be administered by the Wisconsin DNR, along with the $250,000 in trust monies established under the Federal judgment.

La Follette noted: "The size of this settlement is an important precedent underscoring Wisconsin's firm policy of cracking down on polluters and protecting our environment. In general, the paper industry in this State has made exemplary progress in complying with State law. This settlement is a just response to the competitive advantage Scott enjoyed as a result of noncompliance, while other Wisconsin companies expended great effort and many millions of dollars."

Joan F. Kessler, U.S. Attorney for the Eastern District of Wisconsin, praised the cooperative joint efforts of the EPA Region V and the Wisconsin DNR. She noted that the handling of this particular investigation should stand as an example by both units of government of efficient use of investigative resources to accomplish mutually desirable goals in cleaning up the environment.

She also said: "This settlement should serve as a warning to other polluters who consciously choose to disregard the deadlines imposed by Congress for the cleanup of air or water pollution. Federal and State governments are prepared to take firm action, cooperatively if possible, to redress such conduct."

Michigan Puts Sludge To Work

By Carl Wilson and Nancy McKinney

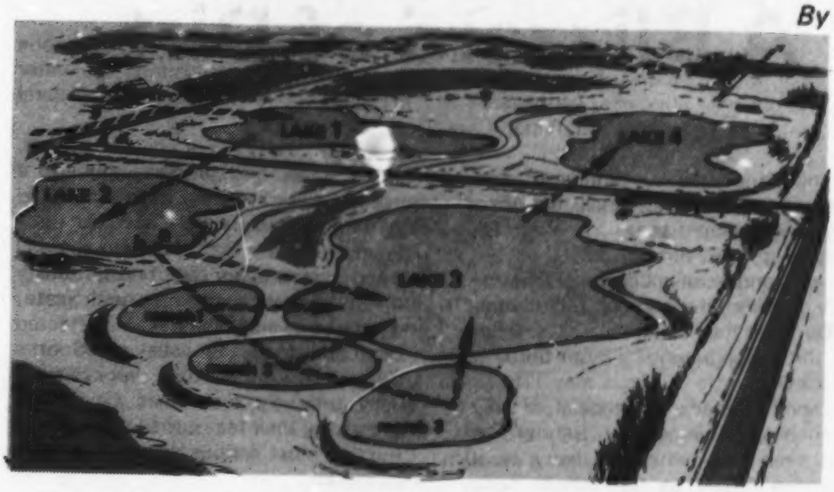


Illustration of the Lake System with arrows indicating flow. Water can be discharged from Lake 2 directly into Lake 3 by Route a, or into the marshes by Route b.

- If all the nation's sludge were incinerated, it would take 900 million gallons annually of crude oil to run the incinerators — about 18 percent of the nation's total yearly oil consumption. It could also cause air pollution and an unpleasant odor for nearby and not so nearby residents.
- Ocean dumping, although cheap and long used by coastal communities, damages marine life, pollutes water and can create unsafe beaches. And recent amendments to the Marine Protection, Research, and Sanctuaries Act will end ocean dumping by 1982.
- Landfills across the country are filling up, and it's difficult or impossible to acquire new sites. It's also costly to buy land and transport the sludge.

Sludge, the unavoidable solid matter that remains after municipal wastewater is treated, is becoming an increasing problem for municipalities, as the three most common forms of disposal are becoming economically or environmentally unfeasible. Investigations into new methods of disposal and treatment methods that do not produce as much sludge are becoming increasingly popular — and necessary.

A new approach to wastewater renovation has been developed by Michigan State University (MSU), and it appears to be unique. A complex system of lakes and marshes and land irrigation, it works with a traditional wastewater treatment plant. Systems like this, using land application, are being researched in many areas, but seldom so successfully as at MSU. This system has potential superior to conventional treatment plants because biological materials can be harvested and put to economic use, scarce nutrients can be recycled, and municipal wastewater can be cleaned in a process that uses solar energy.

The MSU project began in December, 1967, when Dr. Robert C. Ball, former Director of the Division of Natural Resources at MSU, submitted their proposal to the university's approving board of trustees. The next step was to get funding for the project.

Grants were received from the Ford, Rockefeller, and Kresge Foundations as well as from the U.S. EPA and the Michigan Water Resources Commission. The groundbreaking ceremony was held on October 27, 1972, and by the following October the project was completed. Its total cost was $2,398,979.

The MSU system consists of four man-made lakes and three marshes, which have been sealed with native clay so that harmful substances cannot seep into groundwater at any point in the process.

About two million gallons of municipal wastewater per day are pumped from the East Lansing Sewage Treatment Plant, five miles away. This is about one fifth of the plant's daily average flow. The MSU system can accept raw sewage, with no pre-treatment, which is unusual for this type of facility. Wastewater from the East Lansing plant is pumped to the first lake, where it is cleansed of polluting nutrients by lake vegetation. The lakes have a total surface area of 30 acres, with a maximum depth of about 6 feet.

Each lake has a different elevation and depth to promote the growth of various aquatic plants that clean the water. These plants are then harvested for compost or processed into pellets for chicken or cattle feed.

By the time the water reaches the fourth lake, it is clean enough for swimming, has a bacteria count about one fifth that of the nearby Red Cedar River, and meets all State and Federal water quality standards.

From the lakes, the water flows to a control building and a pump house. From there it is channeled to a nearby land system, where irrigation sprayers apply the water to fallow fields and to a woodlot of beech and maple trees.

The pump house is the first place in the process where fossil fuel is used. This is one reason the MSU system's cost for treatment is greatly reduced over conventional methods. A typical advanced waste treatment plant costs $1.50 per 1,000 gallons to run. Although figures are not yet available for the MSU plant, a similar system at Muskegon, Michigan costs only 22 cents per 1,000 gallons to run.

The MSU system also includes an extensive system of monitoring wells that measure the water quality reaching underground areas. Shallow and deep wells are connected to a computer system for data analysis.

Using a method like the one at MSU researchers believe that a community of 10,000 people could effectively dispose of its processed sewage wastewater by applying it to 260 acres of crop land. The cost of planning and building the system would be comparable to that for traditional sewage treatment. However, after 25 years a chemical treatment facility is virtually worthless. A land or lake recycling system, on the other hand, will actually increase in value over the same period of time.

The main problem with this type of system is the land area that it needs, which places an upper limit on the size of the community it can serve.

A Blizzard of Dirt

W.W. Reed/EPA

Snow in the Midwest is not particularly unusual.

But some of the snow in the Ohio River Valley is quite different, for a couple of reasons. In the first place, it often blankets the countryside around New Manchester, West Virginia in July. Besides that, it is usually brownish gray, instead of white. That's because this "snow" doesn't come from Mother Nature. It's fly ash, brought to the residents of the area courtesy of Ohio Edison's W.H. Sammis power plant in Stratton, Ohio.

Examination of pollution records kept by Federal, State, and local officials show the Sammis plant to be the worst particulate polluter in Region V. The plant's four stacks (two 500 footers, one 850 feet, and one 1,000 feet) belch out pollution at a rate conservatively estimated by Ohio environmental officials at up to 8,000 percent greater than the law allows, or as much as 130,000 tons of particulate a year.

"If I owe the government a nickel, they're on my tail in five minutes," said Hancock County Commissioner Joseph Manypenny. "I'd sure like to see them move that fast to protect people's health." He gestured angrily at a 5-inch pile of gray grit that had been dumped from a plastic bag onto white paper for demonstration purposes. "What are our kids' lungs going to look like after five years of breathing that junk?"

The plastic bag of fly ash was collected by Walta Hoover of New Cumberland, WV. She said she sweeps at least that much ash off of her porch almost every morning. The bag weighed ¾ of a pound.

John and Rosalie Cornell of Chester, WV, submitted a quart jar full of water taken from their swimming pool. It had all the appearance of a large bottle of black ink.

David Stevens is principal of New Manchester Elementary School. He has seen days when as many as 50 children report to the school nurse complaining of headaches and breathing difficulties. When the pollution is at its worst, Stevens keeps the children inside during lunch hours and recess. When the kids do go out to play, teachers usually have to clean off the swings and slides with mops and rags. Wendy Pitcock went over to the school playground, but she couldn't go on the slide because it was covered with grime. It was Christmas vacation and no one had cleaned away the fly ash for the last few days.

W.W. Reed/EPA

Joseph Manypenny, Hancock County Commissioner, displays a pile of fly ash collected off the front porch of a New Cumberland, WV home and attributed to the W.H. Sammis plant.

Wendy's mother, Sue Pitcock, is secretary of a steering committee organized by the people of New Manchester to lead the fight against pollution of their valley. She has obtained affidavits from 83 people, alleging a variety of nuisances, adverse health effects, and property damage caused by the dirt falling from the sky. She told of houses that have to be painted every year, cars that have to be washed almost every day, and gutters and downspouts that fill up with grit and have to be shoveled out.

Newcomers to the valley used to walking barefoot in their backyards usually only try that once in New Manchester; their feet turn black.

But the most serious concern is for the children.

Dozens of families have reported chronic respiratory ailments plaguing their youngsters. Many children are suffering from severe allergies that require special medical treatment. Parents frequently report that on trips out of the Ohio River Valley area, the children's symptoms disappear and their health is "magically" restored.

The older residents suffer too, of course. For some of them it has become a question of survival. Robert Pasco has lived in Hancock County for 54 years. His doctors have told him that if he wants to live any more years, it'll have to be somewhere outside the Ohio River Valley.

The children, the elderly, and all the others in the New Manchester area who suffer from respiratory difficulties they believe are caused or aggravated by the fly ash make regular trips to medical specialists in Wheeling and Pittsburgh for allergy shots and expensive medicines.

Things are worst at night. Residents claim that's because Sammis blows out the stacks in the early morning, when, they contend, "Ohio Edison figures no one is looking."

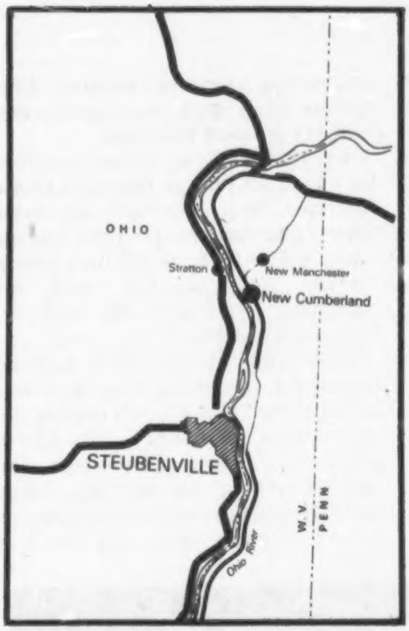
"They must think we're pretty stupid," said Mercedes Beatty, Deputy Clerk for Hancock County. "You can hear the stacks go off all over the valley. It wakes you up at 2 a.m."

"It makes a loud 'whooshing' sound," said Sue Pitcock. "A few minutes later, people can hear the ash and grit hitting their roofs. It sounds like sleet."

The Sammis operation is being challenged on several legal fronts. The village of Stratton, OH, where the

in West Virginia

By W. W. Reid



plant is located, has cited Sammis for repeated violation of State clean air regulations. Stratton Mayor Frederick J. Abdalla has accused Ohio Edison officials of stalling tactics. "The plant is in the habit of pleading not guilty and requesting jury trials while they continue to operate in violation of the law and endanger the health and safety of the citizens," Abdalla said.

West Virginia and the U.S. EPA have filed a joint suit in U.S. District Court in Columbus, OH, asking that the pollution be stopped and requesting imposition of appropriate civil penalties.

In the strongest action prepared so far, a Jefferson County, OH grand jury brought in a unanimous indictment of the Ohio Edison company in November on criminal charges connected with the plant's continued violation of pollution laws. Most of the evidence leading to that indictment was gathered by the North Ohio Valley Air Authority.

NOVAA's Director, Pat DeLuca, scoffs at Ohio Edison's claims of concern for the community. "On December 4, 5, and 6, there was a pollution alert. Yet, on those days Sammis was running at full power, with one stack operating at overload capacity. That says a lot about Ohio Edison's concern for the public welfare."

Sammis representatives have stated that the plant's operation will be cleaned up after a final decision is made regarding the use of high-sulfur local coal vs. low-sulfur Western coal in Ohio power plants. Local environmental officials are skeptical.

"They always have a reason for delaying a cleanup of the plant's operation," says NOVAA Control Engineer Harold Strohmeyer. "Every time we meet with them, they talk about some plan that will go into effect in 10 years or so."

DeLuca claims that other polluters in the northern Ohio River Valley have made some progress in controlling their pollution, while Sammis has stood still. "In 1976, steel mills and power plants in this area spent over $50 million on pollution cleanup. Last year the amount was $22.5 million. In that time, aside from routine maintenance expense, Sammis has spent nothing."

Local residents claim not to see much evidence of air pollution control at the plant. "It just seems to get worse and worse," said Arnold Siegal of New Manchester. "It was bad when they had two small stacks. We complained and they built more."

"People are getting fed up," said Mrs. Pitcock. "If the EPA or NOVAA or the courts or somebody doesn't do something soon, a lot of people in this valley are going to be pretty upset."

DeLuca responded with quiet determination, "This situation can't continue. We'll get 'em."

W.W. Reid/EPA

Wendy Pitcock, of New Manchester, WV, would rather not play on this slide at her elementary school. It's covered with soot.

W.W. Reid/EPA

Sue Pitcock demonstrates how grime quickly accumulates on clean cars in the Ohio River Valley.

Bertram C. Frey, (312) 353-2082, in Chicago, U.S. EPA attorney in the case, is available for information on the Federal suit.

Carpentersville, VanBuren Officials

Art Baden/EPA

William Sanders, Deputy Chief of the Water Division, U.S. EPA Region V, inspects the lift station which ties the subdivision's sewers to the wastewater treatment facility.

Would you go to jail for your local environment?

Village officials from Carpentersville, a small town near Chicago, and from Van Buren Township near Detroit did just that last month, though Federal and State EPAs were not sure if the environmental issues cited were real.

Both of the village boards refused to obey court orders to issue permits for subdivisions to hook up to what the boards considered inadequate sewer systems.

In both cases, local officials also felt that the Federal courts were getting too involved in local affairs.

The Carpentersville case was the result of a bankruptcy action that began in 1970, when the developer who built the subdivision abandoned the project and fled the country. At that point, the subdivision contained more than 200 completed and occupied homes and 11 that were not completed.

The bankruptcy court's only concern is getting the developer's creditors paid, and those 11 houses are not a financial asset so long as they remain unoccupied. The houses, which have been seriously vandalized, cannot be repaired and sold without permits from the village. The bankruptcy judge ordered the village board to issue those permits so the houses could be sold and the money added to the bankrupt developer's assets.

The village officials have exhausted every avenue of appealing that decision. They won the first appeal, lost the second, and have now filed with the U.S. Supreme Court, which can take months to decide whether or not it will hear the case and years to finally decide it.

In the meantime, the village's elected officials, who came to be known as the "Carpentersville Eight," were found in contempt of court for not issuing the permits and were incarcerated at the Federal detention center in Chicago.

Board members have said that since the bankruptcy judge's only concern is the money involved in the future sale of the houses, he is not taking environmental issues into account. They feel the bankruptcy court cannot deal with all aspects of this case.

Before the hearing, which resulted in his trip to jail, Village President Orville Brettman said: "To hook up those sewers and start dumping raw sewage into the Fox River would be a crime, literally and actually, and it's something I just won't do, even if I have to go to jail for it."

Mary Srajer, village trustee, said the reason she was willing to go to jail was because she "took an oath to obey the Constitutions of the U.S. and Illinois and the ordinances of my village. The judge is coming between those things and asking me to issue building permits I don't think are right. I just won't do that."

Art Baden/EPA

Carl Casper, Village Engineer of Carpentersville, explaines where possible sewer problems are in the subdivision.

Jailed

by Nancy McKinney

Art Baden/EPA

Two of the eleven homes in the subdivision which remain unoccupied. They have been vandalized and need re-construction work before they can be sold.

But the judge, following earlier court orders, dismissed that viewpoint. As they stood before him in the U.S. District Courtroom, Judge Frank J. McGarr told them: "In your frequent appearances before the media, you seem somehow to believe in what you're doing. But if you are being advised that the Constitution encourages actions such as yours or that you're being patriotic in doing this, you're being ill-advised and ill-informed."

The trustees were in jail for four days, until they decided to issue the permits. However, some of the residents of the town are planning a class action environmental suit against the purchaser of the property, and the board has pledged to "continue the fight."

The Van Buren Township board went to jail on a charge of "lawless conduct" for refusing to let a 450-unit mobile home park link up with the sewer system in an adjacent township. The board says the sewers are already overloaded and that to allow more hook-ups would cause severe pollution in a nearby lake.

Pat Cullin, Van Buren Township Supervisor, said: "We just can't allow those sewers to become more overloaded. Belleville Lake is the largest in the county, eight miles long, and we don't intend to have it closed down for health reasons like it was two years ago. It was closed all summer; nobody could swim or fish or have any body contact with the water because of the bacteria count. That's going to happen on an even larger scale if we hook up those sewers."

However, Circuit Judge Charles Kaufman ordered the board to approve the sewer connection.

"We simply don't feel that anybody should be able to coerce our voting on issuing permits, and that's just what this judge is trying to do," said Cullin. She also said that the judge "had no business getting involved" in local matters where the board has clear jurisdiction.

The board was found in contempt of court for not issuing the permits. Asked how long the board members would remain in jail, Kaufman replied: "Well, what is their life expectancy?"

However, the board members stayed in jail only 33 hours. They were released pending an appeal hearing scheduled for the end of January.

Environmental aspects of both cases attracted a great deal of media attention. The idea of people going to jail for their beliefs seemed to capture the public's interest and sympathy. But, as people began to look more closely, it became clear that there was disagreement as to whether or not the environment was the real issue at stake.

After sending an investigative task force to Carpentersville to look over the sewage system there, John McGuire, EPA's Region V Administrator, said: "There is simply no question of polluting the Fox River with raw sewage. The lift stations that tie the subdivision to the sewage system and the system itself could easily handle the additional load.

"The construction just completed under a 3-million-dollar grant from us has expanded the capacity of the plant, so we anticipate no problems from adding 11 more homes to the system," McGuire said. "There seems to be some confusion of facts in this case, and we're trying to clear them up."

George Shaw, Carpentersville Village Manager, claims that U.S. EPA made its determination based on inadequate information. The Village has hired a consultant to do a full report on the sewers in the subdivision.

A similar controversy exists in Van Buren. A spokesman for the Michigan Department of Natural Resources, Municipal Wastewater Branch, said that he "seriously doubts" Belleville Lake would be so polluted by the trailer park that it would have to be closed. He also said he doubts that lake pollution is the real issue.

"There are a lot of things that local government and a developer could disagree on, and it could be any of them. Also entering into this is a 25-year-old feud between the two counties that border the lake. I have a hunch they're hiding behind the pollution issue in court."

Cullin claims that DNR doesn't have adequate information to make that assessment. "When that lake was closed down, the [DNR] did all kinds of studies and they couldn't find the cause of the bacteria pollution. So they can't say it wasn't the sewers — they just don't know."

ZAPPED!

EMI Causing Increasing

EMI is a wondrous thing. It can give you Elton John with your Mozart, it can make your toaster sing, it can cause your car to roll to a stop on the tollway, and, if some scientists are to be believed, it might even kill you.

Paul Brodeur's recent book, *The Zapping of America*, has made a great many people very nervous about electromagnetic interference (EMI). Certain experts have been concerned over its mysterious effects for years, and now they're more worried than ever.

Many newspaper and magazine articles have dealt with the issue in the last few months, leading to an increase in the concern of the general public.

There is a curious range of phenomena believed to be caused by EMI.

Most of the problems are merely nuisances: mixed commerical radio signals; television programs jammed by nearby CB or ham radio transmissions; TVs, radios, and stereos scrambled by non-broadcast electronic gear such as automatic garage-door openers or microwave ovens.

One celebrated case featured a toaster that actually burst forth in song because of the powerful EMI caused by a nearby radio broadcasting tower.

More than one automobile with electronic fuel injection has stalled because of interference from CB radios.

A new $100,000 electronic scanning microscope at the Illinois Institute of Technology conked out as soon as it was installed. The culprit in this case was EMI from a television station.

Many scientists still consider such interference more of a bother than a hazard.

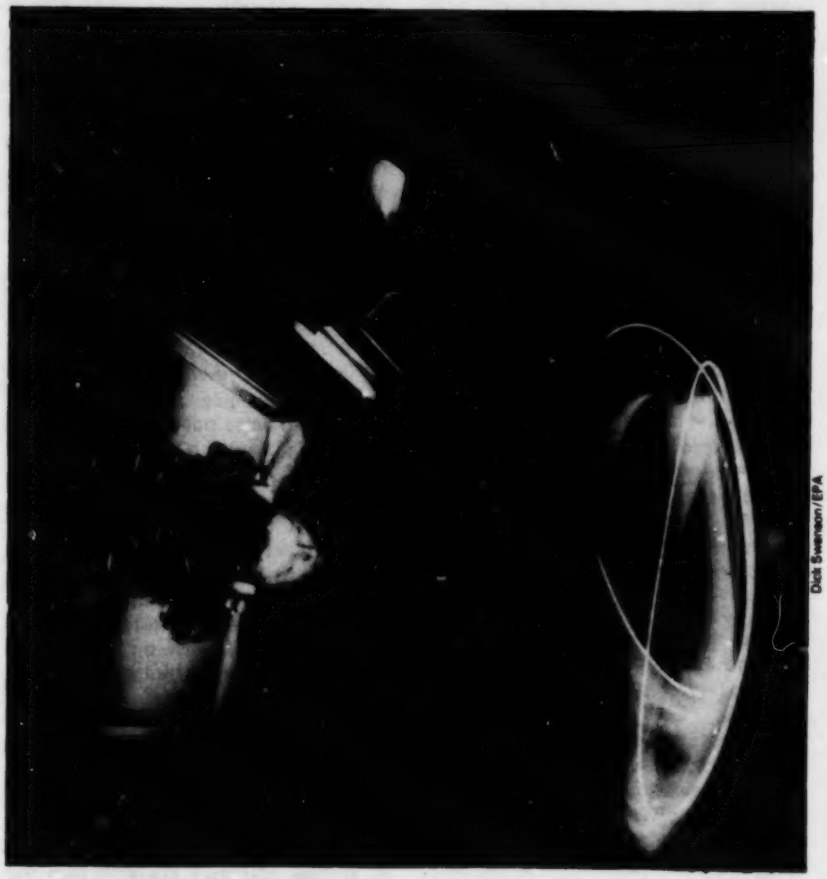
But attention is focusing more and more on the possibility of serious health problems that may be caused by electromagnetic radiation. EPA is taking a closer look at the problem. A specially equipped mobile unit has been patrolling 15 major U.S. cities, collecting data necessary to determine the extent of the problem and the numbers and occupations of people exposed, all in the hopes of establishing guidelines on what should be done in the future. Particular attention is being given to tall buildings.

Downtown Chicago, for example, is confronted with sizable amounts of electromagnetic radiation being emitted from the electronic towers atop such skyscrapers as the Sears Tower and the John Hancock Building. Experts differ on the actual or potential hazard posed by the EMI from these antennae, but the fact remains that radiation levels are much higher for people in the upper floors of surrounding buildings than for those in the lower levels or on the ground. David Janes, non-ionizing radiation expert at the EPA's Office of Radiation Programs, feels there is no cause for alarm. "Those levels are well within tolerable limits," he said.

But Brodeur claims that much of this radiation is capable of causing long-range health problems in people who are frequently exposed.

As for the overall problem of electromagnetic exposure for the general public, Janes said: "Ninety-eight percent of the American people experience exposure to less than one microwatt per square centimeter. That is not a significant level of exposure." EPA will continue to study the problem and make recommendations for improvement of the EMI situation, he maintained.

In another Government study, the General Accounting Office surveyed sources of EMI in the U.S. and stated that the constant electronic bom-


Dick Swenson/EPA

The immediate medical benefits of treatment involving radiation have long been recognized. Scientists are now debating the dangers to patients in the long run.

concern in U.S.

By W.W. Reid

bardment to which Americans are exposed constitutes a "potential harm to public health."

Microwave radiation is an especially sore point with critics of the Federal Government's failure to set stringent standards protecting the public from EMI.

Microwaves are potentially dangerous because they can penetrate the body and cause the temperature of tissue to rise slightly. Not all scientists are sure that these temperature increases, although unfelt, are harmless.

Microwave ovens, the most familiar source of microwave radiation to most Americans, work on essentially this same principle, except that the process is accelerated so that foods are cooked in seconds.

During operation, these ovens "leak" a small amount of microwave radiation. There are legal limits on the radiation emissions from such ovens, and five milliwatts is the present limit. Most scientists feel that this level is safe for everyone, except those wearing heart pacemakers. These people must always avoid microwave ovens.

But studies in the Soviet Union have indicated that the five milliwatt level may actually be dangerously high. EMI overexposure can cause serious neurological problems, according to Soviet reports. These ailments include headaches, dizziness, loss of memory, and mental disorders. The safety level the Russians insist on is 500 times more stringent for workers and 5,000 times stricter for the general public. An increasing number of American scientists are wondering what the Russians know that we don't.

More studies are now being done and preliminary results suggest the Soviets may be on to something.

Another EPA radiation expert, Dr. Daniel F. Cahill, said in a recent interview, "When we at EPA changed our way of doing things to take a look at how the Soviets do things, we began to see things . . . and they appeared to be more correct than we had given them credit for."

Tests on animals indicate that constant exposure to microwave radiation can cause chromosome mutations that could result in birth defects. Other studies suggest that cataracts, blood abnormalities, and even cancer may be brought on by exposure to electromagnetic radiation. The General Accounting Office has reviewed 112 studies on EMI for Congress and has concluded that Federal standards need to be reviewed.

High-voltage power lines may also produce dangerous radiation. The Veterans Administration hospital in Syracuse, NY has conducted tests that suggest people exposed to too much of the high-voltage radiation occurring near power lines may contract blood ailments and suffer chromosome damage.

The military is the largest single source of electronic radiation in the country. Although massive radar installations and powerful communications networks may be crucial to the national defense, they also contribute a frightening amount of radiation to the EMI problem.

Brodeur's book notes the high incidence of birth defects at military bases where fathers were frequently exposed to radar radiation. Brodeur cites several cases of this, the most alarming of which is probably the Ft. Rucker, Alabama story.

Dr. P.B. Peacock of the University of Alabama, while researching congenital birth defects in that State, discovered that the number of babies born with congenital clubfoot at the Lyster Hospital at Ft. Rucker was four times greater than would be expected under normal circumstances. The fathers of all 17 affected babies had been regularly exposed to high levels of radar emissions. After follow-up investigations, the Army and the U.S. EPA maintained that there was no reason for concern, since the statistics in the case were subject to question.

Probably the most common source of EMI in the U.S. is the television set. Consumers Union in recent years has repeatedly warned that radiation from color TV sets can be powerful enough at ranges closer than five feet to damage optic nerves. The implications are obvious for children who spend many hours every day with their noses a few centimeters from the screen.

The problem is not just with the TV sets themselves, but with the proliferation of such sources of radiation. The reason people have only recently gotten excited about EMI problems is that EMI sources have mushroomed phenomenally in the last decade or so.

Television and radio stations, high powered military radar systems, microwave communication networks, CB radio sets, and electronic medical equipment have all increased EMI dramatically in recent years.

It all adds up to a rapid, some would say uncontrolled, growth in a very powerful force that can affect all Americans. It is a force that will be best dealt with by concerned professionals and an informed public.

Dick Swenson/EPA

Giant radar scanners and other powerful communication equipment, such as this installation in Cheasapeake, MD, contribute to electromagnetic pollution.

FEDERAL REGISTER

November 28, 1978 — Rules: Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.; Inert ingredients. Thiabendazole **Proposed Rules:** Air quality implementation plans; delayed compliance orders: Illinois, Tennessee. **Notices:** Pesticide applicator certification and interim certification; **State plans:** Wisconsin. Pesticides; tolerences, registration, petitions, etc.: 5-Chloro-3-methyl-4-nitro-1*h* pyrazole. Propylene. Sodium chlorate. **November 29, 1978 — Notices:** Meetings: Science Advisory Board. **November 30, 1978 — Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: Massachusetts; extension of time. Grants, State and local assistance: Treatment works construction; allotment of Fiscal Years 1978-1979 appropriation. Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: 2,6 Dichloro-4-nitroaniline. Magnesium phosphide.Pesticides; tolerances in animal feeds and hyman food: Magnesium phosphide. **Proposed Rules:** Àir quality implementation plans: Approval and promulgation: Various States, etc.: Ohio; extension of time. Pennsylvania. Ocean dumping: New York Bight Apex; site designation. **Notices:** Chrysler Corp., issuance of recall order. Pesticides; tolerances, registration, petitions, etc.: *O,O*-dimethyl *O*-(4-nitro-m-tolyl) phosphorothioate and its metabolities. Regulatory agenda; semi-annual. **December 1, 1978 — Rules:** Air quality implementation plans; delayed compliance orders: Kansas. **Proposed Rules:** Air quality standards, national primary and secondary: Carbon monoxide; advance notice. **Notices:** Committees; establishiment, renewals, terminations etc.: Air Pollution Control Techniques National Advisory Committee. Water pollution control, safe drinking water; public water systems designations: Rhode Island. **December 4, 1978 — Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: District of Columbia. Toxic substances: Health and safety study reporting; submittal of studies for consideration by TSCA Interagency Testing Committee; correction. **Notices:** Environmental statements; availability, etc.: Agency statements, weekly receipts. Toxic and hazardous substances control: Health and safety studies, denial of petition by Manufacturing Chemists Association.

December 5, 1978 — Rules: Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: Glyphosate. Pesticides, tolerances in food and animal feeds: Glyphosate. **Proposed Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: Pennsylvania. Air quality implementation plans; delayed compliance orders: Louisiana. Maryland. Tennessee. Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: Ammonia. Glyphosate (2 documents). Pesticides; tolerances in animal feeds and food. Glyphosate. **Notices:** Meetings: Diesel emission health effects research plan. FIFRA Scientific Advisory Panel. Pesticides; tolerances, registration, petitions, etc.: Bifenox, etc. Glyphosate; correction (2 documents). Hexazinone. 0,0-Dimethyl 0-(-4-nitro-m-totyl phosphorothioate, etc.; correction. **December 6, 1978 — Proposed Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: Montana; hearing postponed. Air quality implementation plans; delayed compliance orders: Indiana. Missouri. Washington. **December 7, 1978 — Rules:** Air pollution control, new motor vehicles and engines: Certification and testing for vehicles and engines; correction. **Proposed Rules:** Air quality implementation plans; delayed compliance orders: Minnesota. Ohio. **December 8, 1978 — Proposed Rules:** Air pollution; standards of performance for new stationary sources: Electric utility steam generating units. Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: Aldicarb. Petroleum allocation. regulations, mandatory: Normal business practices; wholesale purchaser-resellers; request for interpretation. **Notices:** Meetings: Science Advisory Board. Pesticide applicator certification and interim certification; State plans: District of Columbia. **December 11, 1978 — Rules:** Water pollution control; National discharge elimination system and State program elements: Permits, short and long term options. **Proposed Rules:** Air quality implementation plans; delayed compliance orders: Ohio. **Notices:** Environmental statements; availability, etc.: Agency statements, weekly receipts. Pesticides; tolerances, registration, etc.: Tricyclazole; correction. **December 12, 1978 — Notices:** Air quality criteria: Carbon monoxide. Oxides of nitrogen. **December 13, 1978 — Rules:** Air quality implementation plans; approval and promulgation: Prevention of significant air quality deterioration (PSD); interpretation.

Proposed Rules: Air quality implementation plans; approval and promulgation; various States, etc.: Massachusetts. Air quality implementation plans; delayed compliance orders: Indiana. **Notices:** Meetings: National Air Pollution Control Techniques Advisory Committee. **December 14, 1978 — Proposed Rules:** Air quality implementation plans; delayed compliance orders: Louisiana. **Notices:** Air pollution; ambient air monitoring reference and equivalent methods applications: CO monitor. Meetings: Science Advisory Board. Pesticide and food additive petitions: Pendimethalin, etc. Pesticides; tolerances, registration, etc.: Oxamyl (2 documents). **December 15, 1978 — Rules:** Air quality implementation plans; approval and promuigation; various States, etc.: New Jersey (2 documents). **Proposed Rules:** Air quality implementation plans; approval and promulgations; various States, etc.: District of Columbia. **Notices:** Atmospheric arsenic expusures, documents assessing public health consequences; external review drafts; availability. Environmental statements; availability, etc.: Agency statements, review and comment. Meetings: Interagency Toxic Suhstances Data Committee; date change. Science Advisory Group. Water pollution control: Water supply-wastewater treatment coordination study; workshops. **December 18, 1978 — Proposed Rules:** Waste management, solid: Hazardous waste, identification and listing: advance notice. Hazardous waste guidelines and standards. **58946. Notices:** Environmental statements; availability, etc.: Agency statements, weekly receipts. **December 19, 1978 — Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: California (3 documents). Guam. Authority delegations: Planning and Management, Assistant Administrator, publication of procurement regulations. Public information: Treatment of information submitted under Federal Insecticide, Fungicide, and Rodenticide Act; interim procedures. Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: Carbaryl. **Proposed Rules:** Air quality implementation plans; delayed compliance orders: Indiana. **Notices:** Pesticides; tolerances, registration, petitions, etc.: Difenzoquat. Methomyl. Paraquat. Permethrin. **December 20, 1978 — Notices:** Pesticide registration applications. Pesticides; tolerances, registration, petitions, etc.: Glyphosate. Toxic and hazardous substances: Polychlorinated Biphenyls (PCBs); approved disposal facilities, list. **December 21, 1978 — Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: California (5 documents). Maryland. South Carolina. Vermont. Air quality implementation plans; delayed compliance orders: Kentucky (3 documents). Maine. Toxic substances: Chlorofluoroalkanes, fully halogenated; pesticide essential use exemption. **Proposed Rules:** Air quality implementation plans; delayed compliance orders: Ohio (3 documents). Kansas.

December 22, 1978 — Rules: Air quality implementation plans; delayed compliance orders: Florida. Air programs; energy-related authority: Virginia **Proposed Rules:** Air quality implementation plans; delayed compliance orders: Indiana. **December 26, 1978 — Rules:** Air quality implementation plans; delayed compliance orders: Iowa. **Notices:** Air quality planning grants, urban: availability and inquiry. Environmental statements; availability, etc.: Agency statements, weekly receipts. Grants, State and local assistance: Treatment works, increased use of minority consultants and construction contractors; policy statement. Meetings: Science Advisory Board; cancelled. Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: Diazinon. **December 27, 1978 — Proposed Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: New Jersey. Pennsylvania. Air quality implementation plans; delayed compliance orders: Indiana. **Notices:** Pesticides; tolerances, registration, petitions, etc.: Ferriamicide (to control fire ants); extension of time. Imperial Weed & Grass Killer, etc. **December 28, 1978 — Rules:** Air quality implementation plans; delayed compliance orders: Florida. Idaho. Illinois. Ohio (2 documents) Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: Aldicarb. 0, 0-Diemthyl S-((4-oxo-1,2,3,-benzotriazin-3(4H)-yl)methyl) phosphorodithioate. **Proposed Rules:** Air quality implementation plans; delayed compliance orders: Connecticut. Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: Metolachlor. **Notices:** Air pollution control: Clean Air Act; local or regional economic disruption and unemployment prevention in Ohio. Food additive petitions: Pirimiphos methyl. Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: Norflurazon. Pesticides; tolerances, registration, petitions, etc.: Metolachlor, etc. Sandoz, Inc. et al. Vinyzene. Water pollution control: Pollutants suitable for calculation of total maximum daily loads, identification.

CONSTRUCTION GRANTS

Applicant	Date	Award Amount
ILLINOIS		
Framer City	12-15	$ 75
St. Augustine	12-15	2,610
Harrisburg	12-15	61,650
Monmouth	12-29	12,900
Sauget	12-6	552,750
Elbarn	12-8	269,560
Effingham	12-7	29,400
Hoopeston	12-29	358,275
Urbana-Champaign SD	12-26	35,455
Williamsville	12-13	1,001,025
Salem	12-26	37,888
INDIANA		
Clay City	12-29	$ 12,873
Huntington	12-18	299,850
Brook	12-5	282,675
Delaware County	12-20	285,675
MICHIGAN		
Cumming	12-5	$ 20,250
Rochester	12-14	62,325
Sheridan	12-4	129,450
Spring Lake	12-22	153,150
Grand Haven	12-19	159,000
Woodland	12-14	13,500
Negaunee	12-4	1,202,775
Antrim	12-5	32,250
Romeo	12-7	2,387,925
Oakland County	12-21	389,100
Garfield	12-12	324,075
Ottawa	12-21	375,925
Houghton	12-7	58,875
Muskegon	12-7	235,365
Kent County	12-4	18,600
Ludington	12-21	43,725
Leslie	12-13	875,325
Walkerville	12-27	22,575
Watersmeet	12-28	13,350
Lakeville	12-29	26,025
Clifford	12-28	17,625
Saginaw	12-22	12,300
Gladstone	12-22	26,250
Sagola	12-14	9,150
Forsyth	12-27	488,175
Lake Odessa	12-28	90,900
Van Buren County	12-20	5,100
Springvale-Bear Creek	12-11	803,850
Hillsdale	12-27	2,571,000
Allegan County	12-27	27,275
Kent City	12-27	38,850
South Haven	12-14	29,625
MINNESOTA		
Rochester	12-27	$ 1,293,600
Cold Springs	12-7	1,575
Albany	12-15	12,900
Eitzen	12-29	2,550
OHIO		
West Mansfield	12-29	$ 1,275
Canton	12-26	25,875
Dresden	12-28	33,000
Belmont County	12-6	15,300
Shadyside	12-15	23,550
Circleville	12-7	45,825
Willard	12-13	531,075
Hamilton County	12-18	38,730
Trumbull County	12-12	501,975
Wapakoneta	12-27	141,000
Mahoning County	12-29	378,675
Trumbull County	12-21	278,675
Summit County	12-21	126,000
Miamisburg	12-21	276,750
Gnaden Hutten	12-20	5,400
WISCONSIN		
Cameron	12-5	$ 1,650
Holmen	12-15	975
Seymour	12-19	975
Luck	12-4	8,151
Baraboo	12-4	1,950
Milwaukee County MSD	12-27	149,325
Hustler	12-19	10,650
Linden	12-22	12,670
Plain	12-21	24,150

CBE Leader Dies In Crash

David Comey, president of Citizens for a Better Environment and nationally prominent critic of the nuclear power industry, died in an automobile accident near Madison, WI January 5. He was 44.

Mr. Comey's major contribution to the environmental movement was his ceaseless campaign for safer atomic power plants. Eight years ago, his opposition to the licensing of a Michigan nuclear plant led to a court decision calling for the nuclear industry to include environmental considerations in all construction requests.

In 1974, Comey received the first annual Environmental Quality Award from the U.S. Environmental Protection Agency. The citation praised him, saying that his efforts "immeasurably improved the design and safety review of nuclear reactors."

PEOPLE

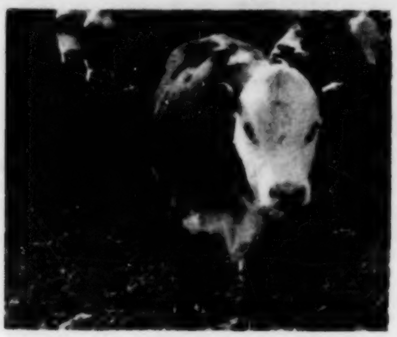
Region V Deputy Regional Administrator **Valdas V. Adamkus** received the EPA's Gold Medal, the Agency's highest honor award, in ceremonies held in Washington, DC on December 15. In that same ceremony, **Donna Sowinski**, a secretary in Region V's Enforcement Division, received the Administrator's Award for Excellence, and **Stephen K. Goranson**, Chief of Region V's Data Analysis Section, received the Public Health Service's Meritorious Service Medal.

Ned W. Williams, Director of the Ohio Environmental Protection Agency, resigned January 6. He intends to work for a Columbus engineering firm. Governor Rhodes named **James F. McAvoy**, deputy director of the State Department of Mental Health, to replace Williams.

Russell Van Herik has been named State director of the Wisconsin chapter of the Nature Conservancy. Van Herik is a Madison attorney, specializing in environmental law. The Nature Conservancy strives to protect land it considers worthy of being conserved in a natural state. Since its founding in 1960, the Conservancy has led the fight to preserve more than 6,700 acres.

The Milwaukee Metropolitan Sewerage District has named **Quentin B. Spector** as its manager of budget and financing. Spector was formerly town manager of Cape Elizabeth, ME.

Environmental news briefs...briefs...briefs...briefs...



Michigan Can Recover PBB Costs

The State of Michigan can sue to recover expenses incurred protecting the public from the accidental mixing of PBB with livestock feed five years ago, a county judge has ruled.

Ingham Circuit Judge James T. Kallman's decision held that the State has the right to seek damages because it is not asking to recover money spent for the benefit of individuals but for all Michigan citizens.

Expenses covered under the decision could include analysis expenses, quarantine enforcement, buying replacement animals and feed, health surveys, and various other costs.

No hearing date was set for the action against companies that manufactured and distributed the PBB, a toxic fire retardant.

Attorneys for the State hailed the decison as a victory. But lawyers for Michigan Chemical Co., which manufactured the toxin, discounted the decision as unenforceable.

American Brick, EPA in Court

The Midwest office of the U.S. EPA, in conjunction with the U.S. Attorney's office has sought a court order to stop the American Brick Company's air pollution violations at its Munster, Indiana and Dolton, Illinois plants.

The plants are sending soot and sulfuric acid into the air at five times the rate allowed by Federal law. The suit seeks a court-imposed cleanup schedule to bring the plants into compliance. The suit also seeks a fine of $50,000 a day for each day plants have violated the Clean Air Act Amendments since they went into effect in August, 1977.

TVA to Spend $3 Billion

Signalling a "new era of concern for public health by the nation's largest public utility," the Tennessee Valley Authority, EPA, 10 citizen health and environmental organizations, and the States of Alabama and Kentucky have announced an agreement to clean up air pollution at 10 of TVA's electric power plants.

The $3.2 billion agreement is the largest ever made with a major air polluter.

"The pollution controls under this agreement would remove more than 970,000 tons of sulfur dioxide and 85,000 tons of particulates a year from the skies of the Tennessee Valley," said EPA Assistant Administrator for Enforcement, Marvin Durning. "Millions of people will benefit from better health."

In 1975, TVA plants emitted 2.1 million tons of sulfur dioxide. This is 38 percent of all sulfur dioxide pollution from power plants in the Southeast, and 16 percent of all such utility pollution in the country.

The agreement requires TVA to meet air pollution standards by the end of 1982. It is the outcome of suits filed against TVA in 1977 in U.S. Districts Courts in Alabama, Tennessee and Kentucky.

Bethlehem Hit In Particulate Suit

Upon recommendation of the EPA's Midwest office, the U.S. Attorney has filed suit against Bethlehem Steel's Burns Harbor mill to clean up "long-standing air pollution problems."

The suit asks the court to impose a cleanup schedule on Bethlehem and to assess a civil penalty of $25,000 for each day of non-compliance with Federal air pollution regulations.

The suit is directed against two coke batteries that emit more than 2,200 tons of particulate matter per year, more than four times the permitted amount.

Limit Diesel Soot

The result of an EPA study of diesel exhaust will be a proposal to strictly limit diesel soot, said Charles Gray, director of the EPA emissions lab in Ann Arbor, MI.

Gray's technicians recently concluded a series of emissions tests on 10 diesel models from both U.S. and foreign manufacturers.

"The diesels emitted up to 100 times the amount of particulates discharged by gasoline-powered cars," Gray said. "The worst of them sent out one gallon of particulates for every 1,000 miles traveled."

Gray said the EPA's limits should be out next month. The standards would allow only 0.6 grams per mile for 1981 cars, to be reduced to 0.2 grams per mile by the 1983 model year. Auto manufacturers have contended that 1.0 grams per mile is as low as they can go.

The EPA is concerned with particulate emissions because diesel soot is a suspected mutagen — an agent capable of causing cell changes, and possibly cancer.

EPA Regs Save Jobs, Cost Little

A major study released January 19 by the Council on Environmental Quality indicates "that environmental quality programs will add very little to inflation over the next few years, while at the same timne few years, while at the same time reducing the unemployment rate," according to CEQ Chairman Charles Warren.

The report indicates that the cost of air and water pollution cleanup required by Federal legislation will add no more than 0.1 to 0.2 percentage points to the average inflation rate over the next eight years.

In addition, the study shows that the unemployment rate can e

In addition, the study shows that the unemployment rate can be expected to drop an average of 0.2 to 0.3 percentage points during the same period.

EPA Administrator Douglas Costle said "This study confirms previous findings that environmental regulations have some positive effects on employment."

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Monitor: Detroit Sewage Mismanaged

A Federally appointed monitor's report on the Detroit sewage treatment plant has been completed and, as expected, it is highly critical of the way the plant is staffed and managed.

The report, ordered by Federal Judge John Feikens to assist him in a lawsuit filed against the city by U.S. EPA, suggests that better management and co-ordination of consultants will be necessary to get the plant working properly and to stop its pollution of the Detroit River.

Among the findings:

- The plant staff is poorly trained. Some of the personnel are discards from other city jobs.
- On-the-job training is poor, and the city isn't taking advantage of available programs.
- Safety hazards are so prevalant that some employees have fallen into sewage treatment tanks. Others have been overcome by chlorine.
- The city still hasn't dealt with the problem of how to dispose of the mountain of sludge the plant produces daily.

In a Jan. 12 hearing, Judge Feikens set a Feb. 1 deadline for city officials to present a comprehensive timetable for meeting Federal clean water regulation.

Feikens said he would turn the facility over to a court-appointed manager if the deadline was not met.

Pollution vs. Jobs

Significant local economic disruption and unemployment will occur if Ohio utilities purchase coal outside the State to meet air pollution standards, EPA has determined.

This determination is the first step in requiring Ohio utilities to use locally available coal together with appropriate pollution controls, under Section 125 of the Clean Air Act.

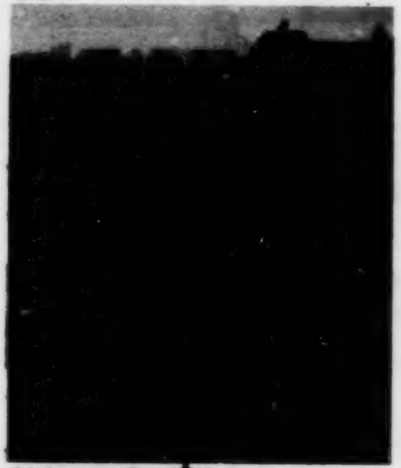
The proposal is open to 60 days of public comment, and a public hearing was to be held in Columbus, Ohio on January 30th.

The public comment period will end February 26. Requests for appearance should be sent to F.J. Biros, Chief, Technical Support Branch, Division of Stationary Source Enforcement, EN-341, U.S. EPA, 401 "M" St. SW, Washington, DC 20460, (202) 755-2560.

EPA studies show that if Ohio utilities switched to out-of-state coal, a total of between 13,000 and 15,000 jobs would be lost, 5,000 in the mines and the rest as a "ripple effect," resulting from closed mines and general business reduction.

EPA has also announced the formation of a negotiation team to work with Ohio utilities in coming up with other means of compliance.

"We would rather negotiate alternative compliance agreements with the utilities and save mining jobs through cooperation instead of by issuing orders. That's why we have formed the negotiating team," said EPA Deputy Administrator Barbara Blum.



Cities to Get $ for Air Cleanup

Urban areas will receive $50 million this year to aid them in developing plans to control air pollution, the U.S. EPA and the Department of Transportation have announced.

The funds will be used by local agencies for planning such strategies as mass transit improvements, bus lanes, car and van pools, and staggered work hours.

The agreement between the two agencies will simplify procedures used by local elected officials to obtain the Federal dollars for planning activities. The funds were authorized in the 1977 Clean Air Act Amendments and were included in EPA's appropriations for 1979.

EPA, U.S. Steel Go to Court

A suit which could result in more than $12.5 million in fines for U.S. Steel Corp. has been brought by the U.S. Attorney on the recommendation of the Midwest office of the EPA. It also seeks to put the company on a new air pollution cleanup schedule.

Five coke batteries and a sinter plant at the Gary works emit about 7,400 tons of particulate matter a year, nearly three times the amount allowed.

The suit seeks a fine of $25,000 per day, retroactive to August, 1977 when the Clean Air Act Amendments went into effect.

Greater Public Support For EPA

Despite the desire for an overall push to cut government expense, the American public would like to see more spending in the areas of air and water pollution control, toxic substances management, disposition of solid waste, and auto safety, a recent nationwide Harris survey has shown.

A 53 percent majority feels that the Federal government is moving too slowly in cleaning up air pollution, compared with only 5 percent who think the pace is too fast and 32 percent who think Washington is moving at the right speed.

A 61 percent majority feels that the efforts to clean up water pollution are moving too slowly.

As regards finding an effective way to dispose of solid waste, 57 percent think not enough is being done.

Fifty-one percent think the government is moving too slowly in keeping toxic substances out of the marketplace.

In efforts to reduce noise pollution, 46 percent feel action is too slow, and 39 percent feel it's about right.

EPA's image has undergone significant change in the last 5 years.

Among the 6 out of 10 people who are familiar with EPA, 22 percent view it as pro-business, 35 percent see it as anti-business, and 35 percent feel it is impartial.

This is a change from 1975, when 42 percent felt EPA was pro-business and 13 percent believed it was anti-business.

When asked how they feel about the cost of environmental control versus the benefits, 45 percent favor "enforcing the toughest environmental standards possible, even if they increase the cost of things to both business and the consumer" while 36 percent would be "satisfied with a somewhat lower level of environmental standards if this turned out to be less costly."

Hands Off Carbs

The EPA has announced changes in emission test procedures that could lead to non-adjustable carburetors in the early 1980s. The changes are being made because many owners are adjusting their carburetors to improve performance, with a resulting increase in pollution.

Under existing rules, prototype vehicles must meet emission rules when carburetor and spark timing settings are as specified by the manufacturer. Under the new rules, which take effect with 1981 models, cars must pass such tests at whatever settings are physically possible.

As a result, auto companies will either have to produce non-adjustable carburetors and distributors or greatly reduce the adjustment range of these devices.

Auto industry reaction has been favorable, with estimates that the rule change will cost less than $10 per car. However, there have also been warnings that during the first 600 to 1,200 miles of engine operation, the cars may not run as smoothly as they might be expected to -- and will once broken in.

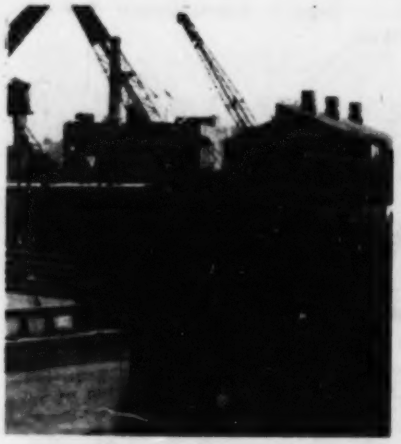
EPA Cracks Down On Tampering

Fewer than one-third of all U.S. cars built since 1973 have properly functioning pollution-control equipment, and much of it probably has been deliberately disabled, an EPA-sponsored study has shown.

The study involved tests of about 2,000 cars driven in six States that lack mandatory inspection programs for pollution-control equipment.

EPA Assistant Administrator for Enforcement, Marvin B. Durning, said EPA will step up its enforcement efforts against tampering with anti-pollution equipment. He pointed to regular inspection of cars as promising the most comprehensive and potentially effective long-term solution to the problem.

"This is a disturbing failure rate," Durning said. "Consumers are spending millions of dollars for pollution control benefits they are not receiving. In addition, urban smog conditions are being made worse by cars that should be helping to solve the problem."



EPA Studies Coal

Although coal is currently considered the nation's main resource, as the U.S. moves toward energy self-sufficiency, many unknowns still exist concerning the effects of the emissions that result from coal combustion.

A new report by EPA's Corvallis Research Lab evaluates the ecological and environmental effects of various types of emissions from coal combustion — including sulfur and nitrogen oxides, fine particulates, photochemical oxidants, and acid precipitation.

The report indentifies economic implications of increased coal consumption and evaluates the reliability of the data. It also addresses both short-term and long-term effects on the environment.

While the current supply lasts, single copies of the report may be obtained from the Information Services Office, Corvallis Lab, 200 W. 35th St., Corvallis, OR 97330. Ask for EPA-600 7-78-108: *Environmental Effects of Increased Coal Utilization.*

Polluter Leaves "Fingerprints"

In a landmark environmental decision, a Federal jury convicted Donald E. Distler, president of Kentucky Liquid Recycling, of illegally dumping toxic chemicals into Louisville, Kentucky's sewage system nearly two years ago.

The conviction marks the first time that an individual has been convicted of criminal charges for polluting a waterway.

It is also the first time that evidence obtained through a sophisticated chemical technique known as "oil spill profiling" or "fingerprinting" has been admitted into a Federal court. The chemical test was done by a U.S. EPA lab and showed that samples taken from the Louisville sewer plant's entry chamber matched samples taken from a tank owned by Distler's company.

The chemical dumping caused the shutdown of the wastewater treatment plant for Louisville and other parts of the surrounding county. During the three months the plant was closed, about 90 million gallons of raw sewage a day were dumped into the Ohio River. Two of the sewer's lines were still closed as of Dec. 27, causing from 7 million to 15 million gallons of sewage to be channeled into the river daily.

OFF THE PRESS

Minnesota Environmental Organizations: A Directory has just been published by the Environmental Conservation Library (ECOL) that describes the efforts of the many organizations actively involved in environmental issues throughout the State.

Membership, purpose, funding, informational services, publications, and research activities are included for each of the 159 citizen and professional groups listed in the directory.

Copies, $3 each, are available from Business Office, Minneapolis Public Library, 300 Nicollet Mall Minneapolis, MN 55401.

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E I S COMMENTS

December 13, 1978 to
January 8, 1979

Sponsoring Agency Project Number Type of EIS	Project Location	Description	Summary of Comments	Comment Date
Dept. of Energy D-DOE-F08006-MN (Draft)	Forbes, MN	500 KV transmission line	Need adequate evaluation of alternatives that could avoid wetlands impacts, including Big Bog area.	ER-2 12-13-78
Housing and Urban Development D-HUD-F8038-OH (Draft)	Cincinnati, OH	Apartment complex disposition	Further discussion of landfill and improved drainage requested.	LO-1 12-13-78
Federal Highway Admin. F-FHW-FH0107-IL (Final)	Rochelle, IL	Highway construction	Previous comments adequately addressed.	12-13-78 (Draft LO-2, 4-4-78)
Housing and Urban Development F-HUD-F85030-IN (Final)	Indianapolis, IN	Mortgage insurance housing development	Previous comments adequately addressed.	12-13-78 (Draft LO-2) (4-4-78)
Dept. of the Interior D-DOI-F61007-MN (Draft)	Voyageurs National Park, MN	Master plan for National Park	Water quality survey and monitoring program requested.	LO-2 12-22-78
Corps of Engineers D-COE-F36056-IL (Draft)	Loves Park, IL	Flood damage reduction program	Insufficient information on water quality impacts and alternatives to concrete channel.	ER-2 12-27-78
Federal Aviation Admin. D-FAA-F51019-MI (Draft)	Coldwater, MI	Runway construction	Inadequate assessment of noise impact.	ER-2 1-3-79
Federal Highway Admin. FHWA-MI-EIS-78-02D (Draft)	Berrien County, MI	Highway construction	Inadequate assessment of wetland impacts.	ER-2 1-3-79
Federal Highway Admin. D-FHWA-F40122-MI	Saginaw, MI	Bridge construction	More information requested on noise impact mitigation and potential air quality effects.	ER-2 1-3-79
Water Resources Council D-WRC-F39007-OH (Draft)	Maumee River Basin, OH, MI, IN	Water and related land resources study	Water supply issues poorly addressed.	LO-2 1-8-79

CODE:
LO – Lack of objections or minor changes suggested.
ER – Environment reservations on certain aspects of project; suggest preliminary determination of impact.
2 – Insufficient information, EPA cannot fully assess project but can make further study of modifications or alternatives.

All Region V EIS Comments are prepared by the Office of Federal Activities, Environmental Impact Review Staff. For more information contact Barb Taylor at (312) 353-2307, U.S. EPA, Region V, 230 S. Dearborn St., Chicago, IL 60604.

NEGATIVE DECLARATIONS

Each issue of ENVIRONMENT MIDWEST carries a list of "negative declarations" that EPA has issued in the recent past for sewage treatment projects to be funded within the Region by the Agency.

A negative declaration is a notification to the public, prior to the grant award, that EPA believes the project's environmental impacts are not significant and that, as a result, an Environmental Impact Statement is not needed.

If you have comments or questions regarding the above projects, contact Gene F. Wojcik, Chief, EIS Preparation Section, at the Region V offices in Chicago (312)353-2157.

Project Location	Estimated Project Cost	Potential EPA Share
Dunkirk, IN	$4,800,000	$3,600,000
Downs, IL	Design $49,000 Construction $1,087,200	$852,750
Vermilion, OH	Design $672,222 Construction $3,229,500	Design $504,166 Construction $2,422,125
Twin Cities, MN	$629,000	$471,750
West Concord, MN	$527,000	$389,553

1979 calendar

FEBRUARY 5

Public meeting to hear comments and suggestions on guidelines for public participation in the Master Plan for the Upper Mississippi River. Sponsored by the Upper Mississippi River Basin Commission, between 11 a.m. and 4 p.m., at the Thunderbird Motel, 2201 E. 78th Street, Bloomington, MN, 55420. (612) 854-3411. Contact Dan Galloway, UMRBC, Ft. Snelling, 510 Federal Building, Twin Cities. MN, 55111. (612) 725-4690.

FEBRUARY 6, 7

EPA is asking for comments on proposed hazardous waste regulations from industry, public interest groups, and other interested parties during the 75-day comment period from January 10 through March 26, 1979, Public Meetings in Region V are: February 6, Hyatt Regency Chicago, 151 East Wacker Drive, Chicago, IL, 60601; February 7, Stouffer's Somerset Inn, 3550 Northfield Road, Shaker Heights, OH, 44122.

FEBRUARY 13

Chapter 9, special waste hauling regulations, as approved for publication by Illinois' Pollution control Board, will not be finalized until the end of the 60-day public comment period, or February 13. When the new regulations are fully implemented, U.S. EPA will be able to pinpoint where special waste is generated and where it is being taken. These new regulations require a permitting system for all haulers of special waste, a manifest program, and "cradle-to-grave" record-keeping control of special wastes generated by some 20,000 manufacturers of industrial waste in Illinois. Written questions or comments must be received by February 13. Send to the Illinois Pollution Control Board, 309 W. Washington St., Chicago, IL 60606, attn: Christan Moffett. (317) 793-3620.

FEBRUARY 13-14

Regular quarterly meeting of the Upper Mississippi River Basin Commission, February 13, and public participation symposium, February 14. At the Hyatt House, Des Moines Airport, Des Moines, Iowa. Contact William Walton, UMRBC, 510 Federal Building, Ft. Snelling, Twin Cities, MN, 55111. (612) 725-4690.

CORRECTION

The three days of public hearings to be held in St. Louis at the Breckenridge Pavilion Hotel dealing with Hazardous Waste Control Regulations will be February 14-16. The date was erroneously given as February 7-9 in the January EM Calendar.

FEBRUARY 26-28

Fourth Annual Illinois Private Sewage Disposal Conference, sponsored by the Illinois Department of Public Health and the University of Illinois Cooperative Extension Service. The three-day session will be held at the Ramada Inn Convention Center, Champaign, IL 61820. There will be a variety of lectures, panel discussions, and exhibits dealing with regulations, technical information, and other matters of interest to private contractors who deal with sewage disposal. For further information contact Conference Supervisor, University of Illinois, 116 Illini Hall, 725 S. Wright, Champaign, IL 61820. (217) 333-1000.

FEBRUARY 27-28, MARCH 1

Water Management Association of Ohio Annual Washington Meeting, at the Holiday Inn-Georgetown, 2505 Wisconsin Ave., Washington, DC, 20007. For further information contact William West, Conference Chairman, c/o Republic Steel Corp., Room 520R, P.O. Box 6778, Cleveland, OH 44101. (216) 574-4452.

FEBRUARY 28, MARCH 1

Central Ohio and Southwest Ohio Land Use Workshops will be held in Columbus on February 28 and in Cincinnati on March 1. Sessions are sponsored by the Ohio Conservation Foundation. There will be a presentation of findings of a Statewide survey of land use attitudes. The meeting will feature a panel discussion of the omnibus land use bill for Ohio. For further information and workshop agenda, contact Peter McChesney, 307 The Arcade, Cleveland, OH, 44114. (216) 771-4100.

ENVIRONMENT MIDWEST
United States
Environmental Protection
Agency
Office of Public Affairs
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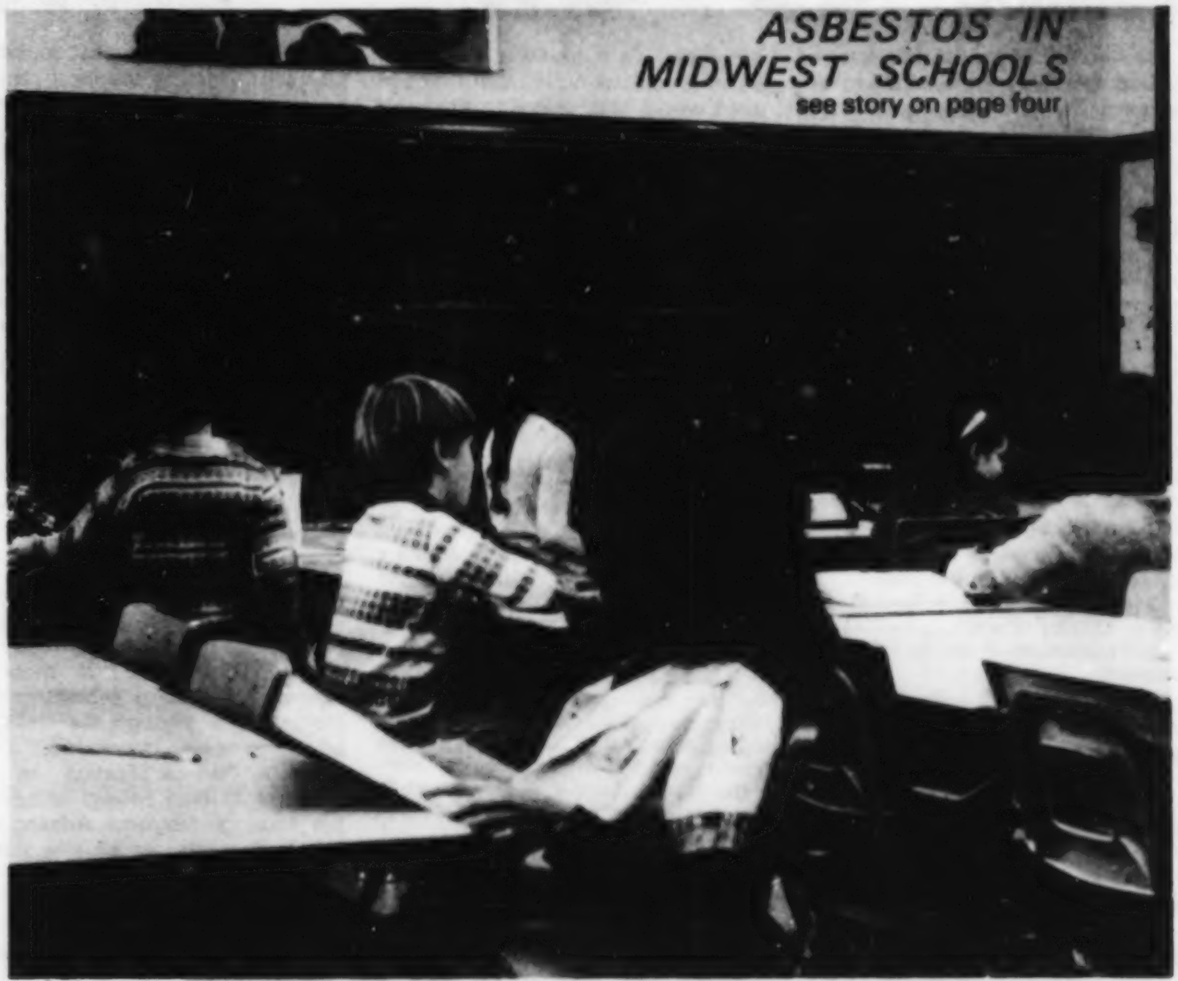

ASBESTOS IN MIDWEST SCHOOLS

see story on page four

Leah Wilson/EPA

The school building pictured here was photographed at random for illustration purposes. EPA intends neither a statement not implication regarding the asbestos that may or may not be present in the building by the use of this picture.

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Frank Corrado . . . . Public Affairs Director
W.W. Reid . . . . Editor
Nancy McKinney . . . . Briefs
Leah Wilson . . . . Graphics Designer

208

"The 208 process has had a significant impact in improving the water quality in Region V. Dozens of sewage treatment plants have been built that might not have been built, were it not for 208."

By W. W. Reid

Section 208 of the Clean Water Act calls for local planning agencies to take responsibility for developing strategies that will ensure clean water in designated areas by 1983.

Since 1974, when the first 208 planning grants were made in Region V, local and State governments and planning agencies have been developing programs designed specifically to meet their own particular water problems. General Federal guidelines are used and $10 million in Federal funds were expended in 1978 alone, but 208 is still basically a local operation.

In order to meet the requirements of the Clean Water Act and to maintain U.S. EPA funding of planning agencies and of water-related construction projects, 208 plans were to have been submitted to Regional EPA offices for assessment in November.

Kent Fuller, Chief of Region V's Water Quality Branch, provided an overall evaluation of the Region's 208 program.

"Most of the 208 agencies at this point owe us completed plans. We are getting plans approved by the local councils of government policy boards and by the governors of some States. Some plans are just now coming in for Regional Administrator certification. The deadline for all this was last November. That deadline was met by no one in Region V, and perhaps by only three agencies nationally."

This tardiness probably won't cause problems, Fuller said. "Failure to submit a completed plan on schedule can be considered grounds by the Regional Administrator for denying construction grants to a given area. I don't really foresee that happening, since the 208 programs are generally doing well, despite the delays."

Some of these delays may have been caused when some 208 agencies, in the early stages of their efforts, tried to do too much.

Fuller characterized that problem "Very frankly, there has been some confused thinking on what was to be submitted. Early in some programs, planners had the notion that their 208 plans would be all things to all people for all time. That was pretty quickly shown to be naive."

Once planning agencies more realistically concentrated on the most serious problems in their respective areas, workable, approvable 208 plans began to take shape.

The most successful 208 planners so far have been those who have relied on their own assessment of their own problems. Federal, regional, and State laws don't really tell local governments what to emphasize in their plans.

"The process calls first for local approval," said Fuller, "then State approval, and then regional approval, so that the priorities really come from all three levels....But first of all, it's a local problem and the solution must ultimately be local in concept."

Citizens are to be consulted.

Public participation is a key element in the 208 regulations. This participation is specifically called for in the Clean Water Act. The public is to have ready access to information concerning 208 in their area. Citizens are to be consulted in the planning process at every reasonable opportunity.

Although some agencies benefitted from excellent citizen input, Fuller said that public participation was not what it might have been in Region V. "You could say we had adequate public participation, but I think we met the letter of the law more than the spirit in some cases."

Fuller sees the 208 program as behind schedule, but moving forward in a generally promising direction. "The program has developed a good deal of momentum," he notes. "We've had a full range of performances. Some are marginal, and we're having some very serious talks with the States about whether we should continue funding or not. But most others are doing some very fine work."

Wherever there are areas for which a local planning agency has not been designated, the State must do the 208 planning. Whereas the local planners have generally been moving forward in more or less timely fashion, the State planners have been gererally behind schedule. As Fuller put it: "The States, by and large, have been slow to pick up on the program from their side, in terms of planning for the areas that are not covered by designated agencies. But every one of the States is building momentum."

There are 32 designated 208 planning agencies in Region V, and there is Federal funding for 208 planning by five States. (Michigan will receive its 208 funding soon.) Of those 37 agencies, five have submitted plans that made it through the entire approval process, from local board approval to certification by the governor to final Federal approval in the form of Regional Administrator certification after which they can be implemented. Several others are currently being reviewed by the governors, and more are getting local approval every week. So, behind schedule though it may be, the 208 program is moving ahead in Region V.

"You could say we had adequate public participation, but I think we met the letter of the law more than the spirit in some cases."

In providing an overview of 208 in the Region, Fuller cited some success stories and a few stories of the not so successful.

The Southeastern Michigan Council of Governments was one 208 agency that acted successfully and effectively from the beginning. SEMCOG is unique; of all the 208 agencies in the nation, it is the only one to assure its funding through its own operation. SEMCOG leaders put together a funding scheme that included a contractual relationship between

SEMCOG and 128 communities and agencies that operate water and waste treatment plants within the seven-county designated 208 area. This funding arrangement was agreed upon even before the 208 planning began.

"Other 208 agencies have to beg, borrow, and steal to get by," said Larry Ehorn, SEMCOG's project officer for EPA at Region V offices. "We expect SEMCOG's grant requests to drop to zero, because that agency will have an assured funding source."

Fuller went on to praise the efforts of the Southeast Wisconsin Regional Commission, known as SEWERPAC. "They are doing some very advanced work on nonpoint source pollution control, going into small watershed areas and obtaining enough data and doing sophisticated enough modeling to be able to go to the local public with a complete set of options for solving the problem. SEWERPAC's techniques are very thorough and very cost-effective. I know of no other 208 agency in the country that has reached this level of sophistication."

Fuller also had praise for the work done by some States. "Illinois has done some very good urban nonpoint source studies. Wisconsin has probably done the most outstanding work on 208 of all the States in the Region. Wisconsin's planners have done pioneering work in wasteload allocation...they have used some very sophisticated permit - writing techniques and have taken major steps in public participation. The 208 agency in the Lower Fox River in Wisconsin has been able to bridge the gap of hostility that has always existed between the State DNR and the local people. I would point to that as a major success."

> *"Some 208 agencies have to beg, borrow, and steal to get by..."*

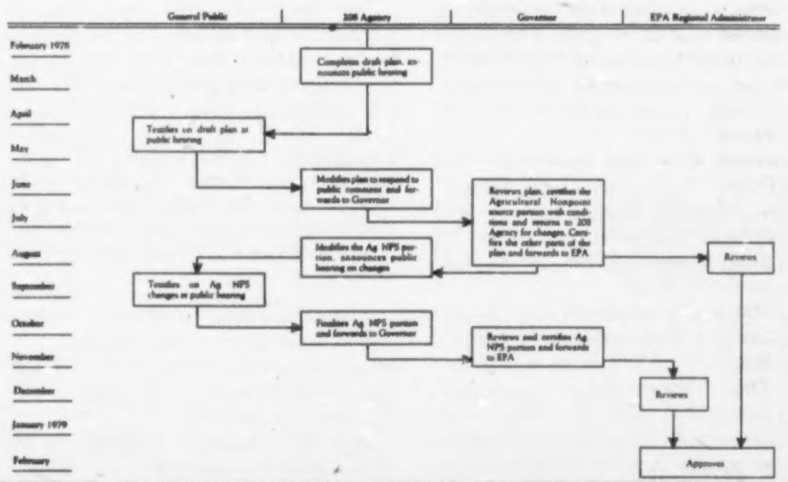
On the other side, Fuller discussed some disappointing 208 efforts. "We've had some marginal performances, no doubt about it. The Toledo Metropolitan Area Council of Governments (TMACOG) attempted to address virtually every water quality issue. They spread their effort very thin. The product we got from them was so thin that it could not lead to decision-making. So we have not been willing to fund them further." He added that the State would continue to fund TMACOG, with the Region assisting Ohio, which is making very selective use of TMACOG's limited planning capabilities. Jackson, Michigan and Canton, Ohio 208 agencies may also lose EPA funding for basically the same reason.

"Overall, Fuller said, "the 208 program has ready had a major impact on water quality in Region V. Dozens of sewage treatment plants have been built that might not have been built, or that might have been built differently were it not for the planning system brought to the communities by the 208 process. Long-standing conflicts were finally resolved in many cases, and work moved ahead for the first time in many years."

The whole problem of nonpoint source pollution would hardly have been addressed at all had it not been for 208 planning. "There is no question in my mind that we would be nowhere near where we are on nonpoint work without 208," said Fuller.

"The 208 process has had a significant impact in improving the overall water quality in Region V. If, in the future, we are not still using 208, we're going to be dealing with something very much like it. It's an indispensable tool in the fight for clean water."

HYPOTHETICAL SCENARIO FOR 208 PLAN APPROVAL


General Public
208 Agency
Governor
EPA Regional Administrator
February 1978
March
April
May
June
July
August
September
October
November
December
January 1979
February
Completes draft plan, announces public hearing
Testifies on draft plan at public hearing
Modifies plan to respond to public comment and forwards to Governor
Reviews plan, certifies the Agricultural Nonpoint source portion with conditions and returns to 208 Agency for changes. Certifies the other parts of the plan and forwards to EPA
Modifies the Ag NPS portion, announces public hearing on changes
Testifies on Ag NPS changes at public hearing
Finalizes Ag NPS portion and forwards to Governor
Reviews and certifies Ag NPS portion and forwards to EPA
Reviews
Reviews
Approves

Region V 208 and State Agencies

Illinois: Illinois EPA, Springfield. Southwestern Illinois Metropolitan and Regional Planning Commission, Collinsville. Northeastern Illinois Planning and Development Commission, Chicago. Greater Egypt Regional Planning and Development Commission, Carbondale.

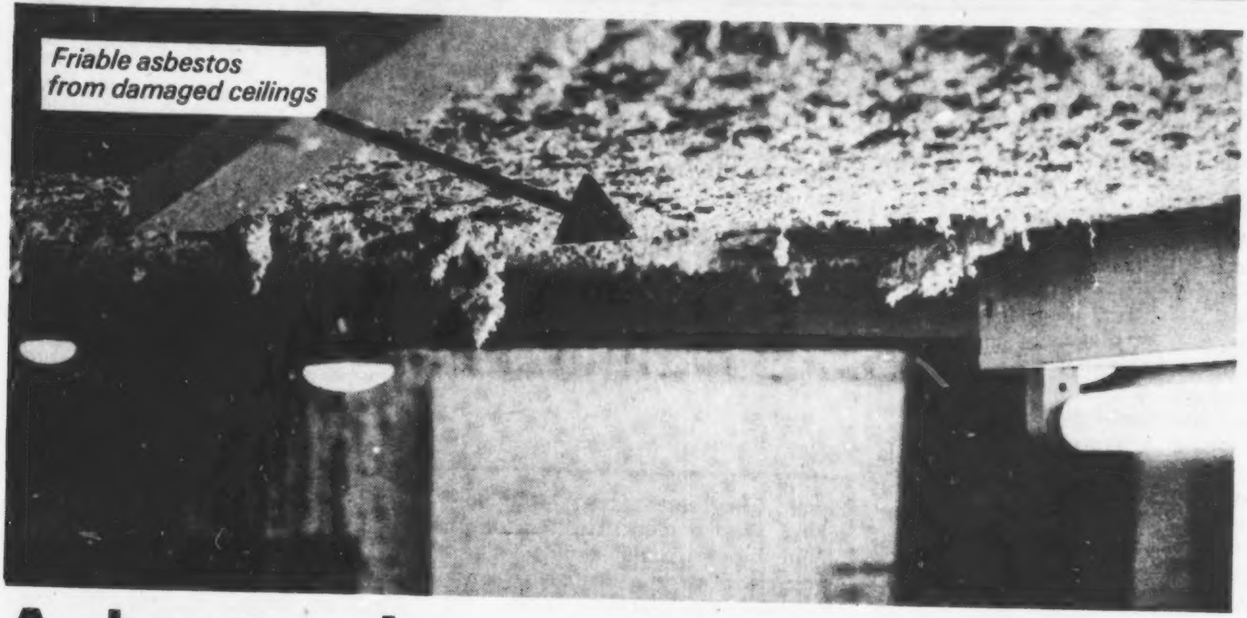
Indiana: Stream Pollution Control Board, Indianapolis. Northwestern Indiana Regional Planning Commission, Highland. Michiana Area Council of Governments, South Bend. Region 6 Planning and Development Commission, Muncie. Indiana Heartland Coordinating Commission, Indianapolis. West Central Indiana Economic Development District, Terre Haute.

Michigan: Bureau of Environmental Protection, Department of Natural Resources, Lansing. Southeastern Michigan Council of Governments, Detroit. South Central Michigan Planning Council, Nazareth. Genesee, Lapeer, and Shiawassee— Region V, Flint. Region II Planning Commission, Jackson. East Central Michigan Regional Planning Commission, Saginaw. West Michigan Shoreline Regional Development Commission, Muskegon. West Michigan Regional Planning Commission, Grand Rapids. Tri-County Regional Planning Commission, Lansing. Eastern Upper Peninsula Regional Planning and Development Commission, Sault Sainte Marie. Northwest Michigan Regional Planning and Development Commission, Traverse City. Northeast Michigan Council of Governments, Gaylord. Western Upper Peninsula Planning and Development Commission, Houghton. Southwestern Michigan Regional Planning Commission, St. Joseph. Central Upper Peninsula Planning and

Minnesota: Pollution Control Agency, Roseville. Metropolitan Council, St. Paul.

Ohio: Ohio EPA, Columbus. Ohio-Kentucky-Indiana Regional Council of Governments, Cincinnati. Toledo Metropolitan Area Council of Governments, Toledo. Miami Valley Regional Planning Commission, Dayton. Eastgate Development and Transportation Agency, Youngstown. Northeast Ohio Four County Coordination Organization, Akron. Northeast Ohio Areawide Coordinating Agency, Cleveland.

Wisconsin: Department of Natural Resources, Madison. S. E. Wisconsin Regional Planning Commission, Waukesha. Dane County Regional Planning Commission, Madison. Fox Valley Water Quality Planning Agency, Neehah.



Asbestos in Midwest Schools

By W. W. Reid

It is unfortunately an old story in an age of rapidly developing technology: A fabulous process is discovered that is of great immediate benefit, but it turns out to be a threat in the long run. Thalidomide, cyclamates, and x-rays — all come to mind in this context.

So, too it is with asbestos. This miraculous fireproofing and soundproofing material, such a boon to the construction industry for some 20 years, has turned out to be a potential killer.

Asbestos is a mineral that is flame-resistant and heat-resistant; it can be processed in a variety of forms for application just about anywhere fireproofing is desired. Since the process became commercially feasible during World War II, asbestos has been applied almost everywhere. It is mixed with paint and with concrete, laminated into walls, wrapped around pipes, sprayed onto almost anything.

Delayed reaction

Asbestos can be integrated into almost any construction process because it is made up of small, virtually indestructible fibers. Unfortunately, those fibers are also small enough to float freely in the air for long periods of time. Anyone who breathes that air inhales those tiny, almost undetected, particles. Because they are indestructible, they can remain in the victims' lungs indefinitely.

The discovery that exposure to asbestos in the air can lead to serious health problems is recent. Thousands of shipyard employees who worked with asbestos during World War II were found to have developed asbestosis, mesothelioma, and lung cancer in the 1960s. Asbestos mine workers also developed rare diseases associated with exposure to asbestos, 20 or more years after working with the mineral.

This delayed reaction makes research into the real dangers of asbestos exposure difficult. A disease that takes 20 years to develop is difficult to study in a lab.

But Dr. Lyman Condie, pharmacologist/toxicologist in EPA's Region V Office of Toxic Substances, says that perhaps 50,000 cases of lung cancer annually can be attributed to asbestos exposure.

Health officials are worried that children in schools constructed with asbestos fire protection and soundproofing may develop lung problems when they grow up.

Asbestos was used in a variety of ways in school construction. Dr. Condie explains it was frequently used "in spray material for construction purposes such as accoustical insulation in school auditoriums and gymnasiums; it has been used for its insulating properties around heat vents and hot water pipes, and for its fire-retardant properties on ceilings."

Do Not Disturb

Asbestos does not pose a health threat unless it gets into the air, Condie points out. So long as the fibers remain undisturbed on the surface to which they were applied during construction, there is no threat. In non-spray materials such as accoustical ceiling tiles and vinyl floor tiles, asbestos fibers are firmly bound and usually are not a hazard.

"But," warns Condie, "when sprayed surfaces are exposed to student activities—bouncing basketballs off gymnasium ceilings, or kids runnning their hands along stairway ceilings where asbestos has been sprayed—there can be a problem."

He continues: "There can be a hazard with maintenance operations if janitors get up into ceilings and work around ventilation ducts and pipes where asbestos has been sprayed. The asbestos can then flake off into the air. Because the fibers are very small and light, they can move throughout the entire building, even though only a small area was disturbed.

"There are, in our Region, about 20,000 schools," says Dr. Condie, "and I would estimate that at least 20 percent of them have sprayed asbestos in them. The percentage for schools built between 1950 and 1970 would probably be higher—about 50 percent. The number of schools that have an actual airborne asbestos hazard would be a much smaller percent.

The Environmental Defense Fund has published a survey estimating that 15 percent of the nation's schools may contain asbestos and that five percent of the students may be exposed to airborne asbestos. In terms of Region V's public school systems, that could amount to 400,000 students.

Positive identification of an asbestos hazard is a job for professionals, Condie says. "It's very difficult to determine visually if asbestos is present. You usually have to collect the material and send it to a lab that has the proper equipment for detecting asbestos fibers. X-ray defraction and petrographic techniques can definitely determine if asbestos fibers are present."

One might think that, by consulting a school's building plans or construction records, asbestos use could be identified. Unfortunately, this is not the case, as Condie points out.

"You could never be certain without professional analysis that asbestos hadn't been used, even though it wasn't mentioned in the building records. There was a time when asbestos was so widely used, builders didn't very often consider itemizing it in their records. A school could have 10 or 15 percent asbestos in sprayed-on material and it wouldn't show up in the records."

Dr. Condie's advice for school officials concerned about asbestos is this: "If the school was built or renovated between 1950 and 1970 and it contains sprayed material that is exposed, crumbling, or falling down and getting into the air, officials should take the necessary steps to determine whether or not that material is asbestos."

"Asbestos got into school buildings over a period of decades, and it's going to take some time to get it out."

Anyone suspecting an asbestos hazard in a school should contact the local school district, since the problem will have to be dealt with at that level.

In March of this year, the U.S. EPA will be sending out information to school districts across the country concerning a voluntary asbestos hazard abatement program. This information will include a technical report for use by the school districts' architects and engineers, as well as a packet designed for local school officials.

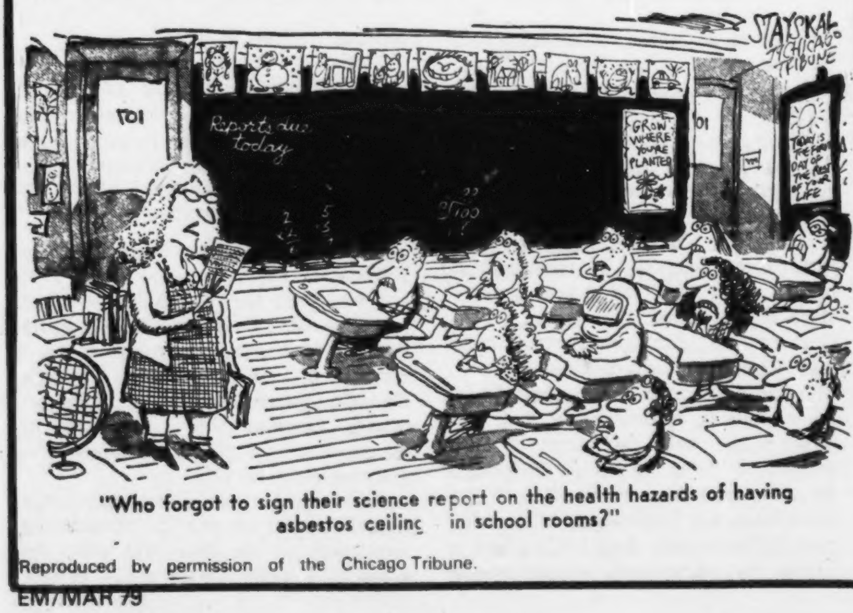
This information should enable school districts to assess any asbestos problem they may have and help them decide on a course of action, if necessary.

"There are essentially three ways to deal with an asbestos hazard," says Condie. "There is removal of the asbestos, which can be very expensive. Secondly, barriers can be built around the asbestos area to prevent airborne fibers from getting into places where they might be inhaled. Finally a special encapsulation or sealant technique can be used to prevent the fibers from becoming airborne."

Condie believes the outlook for dealing successfully with the problem of asbestos in public schools is good, if proper professional procedures are followed. "All of the States in Region V are developing programs for identifying and cleaning up asbestos hazards in public schools and other public buildings."

The school districts and the EPA are taking an orderly approach to the problem, and Condie believes this is the only way to effectively deal with asbestos in public schools.

"People have to realize that it's going to take a long time to solve this problem. Asbestos got into school buildings over a period of decades, and it's going to take some time to get it out. We don't want school officials, teachers, or parents to push the panic button. Like any of our serious environmental problems, it can only be solved with a deliberate effort over a period of time."


STAYSKAL
CHICAGO TRIBUNE
101
Reports due today
GROW WHERE YOU'RE PLANTED
101
TODAY IS THE FIRST DAY OF THE REST OF YOUR LIFE

"Who forgot to sign their science report on the health hazards of having asbestos ceilings in school rooms?"

Reproduced by permission of the Chicago Tribune.

The EPA will hold a series of training sessions for Federal and State officials involved in addressing the hazards of sprayed materials containing asbestos in public schools. Technical assistance and information will be provided by several nationally recognized experts who will explain how to identify asbestos materials, how to evaluate the risk, and how to take proper corrective measures. Contact Region V Toxic Substances Coordinator, (312) 353-2291, for information on the training sessions.

Bottle

Opponents of bottle laws say returnables cost more, but a trip to the grocer doesn't bear this out.

by W. W. Reid

It will cost millions. It will save millions.

Thousands of jobs will be lost. Thousands of jobs will be created.

Litter will be as bad as ever. Litter will practically disappear.

The topic in question is legislation banning nonreturnable beverage bottles and cans. Controversy surrounds such legislation, which was recently enacted in Michigan and is being considered in Ohio and Illinois.

Proponents of the ban on disposables point to Oregon's eight-year-old law, which made throwaways illegal in 1971 and has been an apparent success. Litter has been all but eliminated from Oregon's roadways, and Oregonians enthusiastically continue to support the law.

But anti-bottle bill activists point out that Oregon is essentially a rural State and thus is not comparable to industrialized Michigan, Ohio, and Illinois. The Michigan law, which went into effect in December, is the first attempt to prohibit disposable beverage bottles and cans in such a densely populated, urbanized State.

Other States besides Oregon and Michigan with disposable container bans currently in effect are Vermont, Maine, Iowa, and Connecticut.

But in every State, whether generally urban or rural in nature, the question of price is frequently debated. Opponents of the ban say the extra labor and equipment to handle all the returnables will drive beverage costs up.

Prices *have* increased in Michigan by 2 cents to 5 cents per container, but those who favor the ban say this is a temporary increase. Prices will return to normal once bottlers recoup their initial investment, they say. Legislation supporters again cite Oregon, where prices rose initially but now are the same as in neighboring Washington, which has no bottle law. (Washington will be deciding the issue this year, when a returnable ban goes on the ballot.)

Although prices may go up temporarily when all cans and bottles are returnable, the fact remains that when pop and beer are offered in *either* throwaways or returnables, the returnables become far cheaper. A recent visit to a Chicago-area grocery store showed that a gallon of Coca-Cola cost $3.32 in nonreturnable cans and $2.40 in nonreturnable bottles. The same gallon of Coke costs $1.80 when sold in returnable bottles, approximately half the cost of the throwaway cans. This price advantage for consumers is lost when all beverage containers are returnable, of course, but bottle-deposit advocates claim it proves that prices need not necessarily rise when throwaways are banned.

A central issue in the controversy is whether or not a bottle bill will cause unemployment. The answer seems to be an unequivocal "yes and no."

Most bottle - bill opponents predict massive layoffs in the beverage container industry if throwaways are banned. Both the governor and lieutenant governor of Ohio have come out against the State's proposed bill, citing concern about such unemployment.

Arguments to the contrary come from an unlikely source.

Peter W. Stroh, president of the Stroh Brewery Company of Detroit, has said that Michigan's new bottle creating device." Stroh maintains that increased costs to packagers, distributors, and consumers offset the benefit of the increased jobs.

Unions in Michigan supported the throwaway ban because it would lead to more jobs for the additional store clerks and truck drivers who would be needed to handle the returned containers. At the same time, National Can Co. closed one of its Michigan plants because of a decline in demand for its product. Ninety employees were laid off.

Eleven States now either have bottle bills in effect or will be considering legislation on the issue this year. As more and more States move in this

Laws

photos by North Shore Ecology Center.

direction, momentum is building for a law has resulted in an "increase in jobs across the board" and "would have to be described as a wonderful job-national ban on throwaways. The President's Resource Conservation Committee has recommended such legislation to Congress. A national beverage container deposit bill has been introduced in the Senate and will be brought up in the House shortly.

The beverage industry, at one time solidly opposed to such a national ban, has had two important defectors from the ranks. Coors Company and Falstaff Brewing Corporation have both announced they are in favor of a uniform national ban on disposables. They feel it is worth the additional expense if they can avoid dealing with a tangle of conflicting State laws.

The lobbyists both for and against a national bottle ban are focusing their efforts on Ohio. Proponents feel that if Ohio, a second highly populous, highly industrialized State, follows Michigan, the impetus toward a national law will be difficult to resist.

By the same token, opponents of a national bottle law feel that the Ohio election gives them a chance to turn the tide, especially if the new ban in Michigan encounters public opposition later.

Those opposed to a bottle law aren't asking the public to simply learn to live with litter and like it. They have an alternative : the litter tax.

Such a tax is imposed on the manufacturer of items that usually end up as litter. The revenues from that tax are used in cleanup operations and in anti-litter ad campaigns. Lobbies promoting the litter tax, such as the Glass Packaging Institute, point out plastics, and rubber. The Glass Institute maintains that these materials make up more than 50 percent of all litter, while cans and bottles make up only 25 percent.

Changing human nature is what bottle laws are all about.

Sandi Nelson, lobbyist for Environmental Action, a Washington, D.C. group, disputed those figures. She claimed that an item-by-item count shows that cans and bottles may indeed amount to only 25 percent of the litter problem. But that method of calculation considers a gum wrapper and an empty quart beer bottle as the that the tax is imposed on paper, same: one piece of litter. Based on volume or weight measures, said Nelson, cans and bottles account for more than half of all litter.

Nelson also had a few choice words for the concept behind the litter tax: "It infuriates me that under the litter tax, I would have to pay for the dodo who tosses a bottle or can out of the window. With a bottle law, he loses the 5 cents, not me. And some kid comes along and picks up the bottle and gets the money."

The classic scene of kids scrounging the roadside ditches for the valuable refuse cast aside by their thoughtless elders is not being replayed in Michigan. Beverage retailers don't accept bottles and cans scavenged by youngsters. They only redeem containers from "bona fide consumers," and then only if they are segregated by metal type and glass color. Michigan retailers crush the cans once they've been redeemed and therefore do not accept cans that are already crushed in order, they claim, to keep the same cans from being returned over and over. The retailers say such measures are necessary to maintain some order in the face of an avalanche of containers being returned.

Michigan environmentalists, however, say the retailers are harrassing people bringing in returnables, in hopes of inciting resentment of the law that will lead to its repeal.

In many urban and suburban areas, recycling operations have been slowly growing in recent years and are now actually beginning to have some measurable effect on the mountain of litter cast away by Americans each year. What impact will bottle and can deposit laws have on these operations?

"Not really much effect at all," said George Brabec, project supervisor for the North Shore Ecology Center, north of Chicago. "Containers that would be returnable under a bottle law make up a small enough percentage of our total business that it wouldn't make too much difference." Also, Brabec expects to get a fair number of returnable containers, which he can redeem for 10 cents a container, instead of 8 cents for a pound of containers. "People are still going to throw things away. You can't change human nature."

Changing human nature is what bottle laws are all about. America's attention will continue to focus on the Midwest in the coming months as the fate of what is becoming a national movement to ban throwaways is decided in the legislatures and polling places of the States of Region V.

In Defense of the Clean Air Act

Cynthia Johnston

Assistant Administrator Hawkins addresses the Air Quality Conference.

By David G. Hawkins

On Monday, January 15, 1979, U.S. EPA's Assistant Administrator for Air, Noise and Radiation, "David G. Hawkins, spoke before the Air Quality Conference sponsored by business, industry, and labor representatives in San Francisco.

In his speech, Hawkins met head-on the most frequent criticisms of the amended Clean Air Act of 1977 and dealt with them in turn.

He began with remarks directed at critics of the Clean Air Act who predict economic disaster if requirements of the law are carried out.

> *"We are seeing a pattern of exaggeration and distortion as part of a scare campaign."*

"Throughout history, society has had to contend with its prophets of doom. Just a few years back, advocates of environmental protection were labeled as prophets of doom. Today it appears that the new doomsday prophets are some business and industry groups who raise the spectre of economic peril, allegedly caused by our health and social legislation. The mounting attack on the Clean Air Act is an example of these cries of impending disaster.

"What we are seeing is a pattern of gross exaggeration and distortion of the Act's provisions as part of a scare campaign to change the law; legalistic obstruction of the regulatory process; and uncritical use of scientific studies that suit industry's needs, no matter how implausible the results.

"Some industry groups seem to be trying to convince the American public that the Clean Air Act is the problem," he said. "The real problem is not a piece of legislation, however. It is that more than 100 million people are living in metropolitan areas where our national ambient air quality standards are being exceeded."

He said his address was intended to state the facts surrounding the Clean Air Act. He hoped those at the gathering were there to get the facts, straight and were not "just interested in rallying a mob to lynch the Clean Air Act."

Hawkins said he felt that labor's concerns over the Act were the result of getting only one side of the story, a problem he hoped to correct in the course of his address.

He then dealt with various false allegations about the Clean Air Act.

The first of these is that industrial growth is not possible in areas where clean air standards have not been met. He pointed out that the EPA realized long ago that it could not prohibit growth. As a result of this realization, "In December of 1976, EPA developed the Emission Offset Ruling to address the problem of new sources in areas not meeting air quality standards."

He noted that Congress endorsed that ruling and said that "this policy allows new-source construction in these areas, provided there are compensating emission reductions from existing sources and that emissions from the proposed new source are minimized by using very good control technology. This policy has been in effect for more than two years now and, while some projects have been delayed until adequate offsets have been found, new sources have continued to be approved throughout the country."

In response to the "sanctions are inevitable" argument, Hawkins said:

"EPA has gone to great lengths to establish criteria for the 1979 plan revisions that are reasonable and which we believe can be met by any State that makes a good-faith effort. Accordingly, we feel that most States should look upon these so-called 'sanctions' not as a threat but, rather, as a means of protecting those States that are working in good faith toward the development of an acceptable plan."

He added that EPA had streamlined clean air requirements and noted that the revised 1982 deadline gives ample time to deal with problems.

Hawkins also noted that the required State Implementation Plans are beginning to come in, and that he expected most to be under review in a few weeks. "We know there will be some problems but, in general, the outlook is fairly good."

He continued down the list of common complaints. "Claims have been made that the ambient standards are unrealistically strict and should be changed. In turn, some point to this debate as a reason to oppose doing anything to reduce pollution. I think this is irresponsible." The EPA has always reviewed and stands ready to further review pollution standards as necessary, he said.

"The simple fact is there will always be debates about whether a given standard is too strong or too weak. Such debates are fine, but they should not become an excuse for doing nothing to reduce existing health problems. Many cities are far above existing health standards. Would it really be good policy to tolerate these conditions for decades more, while we search for perfection in setting health standards? Congress read the public will in 1977 and said no. There are reasonable things that can be done now, and we should do them."

Hawkins argued that the things EPA asks of States are not beyond reason. "Necessary stationary source controls, auto inspections, and better transportation planning—these are what are being called for. If these measures aren't accepted as reasonable, then what is?"

Some critics have claimed that nature, not man, causes most of our pollution problems. Hawkins cited a few of the more bizarre instances covered in the media and showed how each was a case of either a misunderstanding of pollution measuring techniques or a misinterpretation of natural processes, or both. He concluded: "The evidence simply will not support the claim that nature is a significant contributor to smog in our cities."

In response to the criticism that air-quality permits stifle growth, Hawkins pointed out that the majority of such permits are issued without undue delay and that the process has been streamlined to further facilitate prompt issuance. Hawkins' advice for those seeking to avoid delay in construction was to plan ahead.

"The new-source review procedures should not significantly delay the construction of new industry, so long as the permitting process is incorporated into the early planning stages of a project." He also pointed out that continued monitoring will rarely be required, except in major hydrocarbon sources that choose to locate in attainment or unclassified areas.

> ***"The real loser will be the American public, which will be exposed to high pollution levels for more years than are necessary."***

Since the States handle most of the Offset Ruling Permits, EPA does not have comprehensive figures dealing with that matter, Hawkins said. But he did state that any delays were not caused by Federal regulations. "The delays caused by the offset requirements have been relatively minor in cases when the offsets have come from within a plant that is being expanded or when the company runs other plants in the area that can provide offsets." He went on to suggest that the problems will be reduced as States and industry become more familiar with the offset concept.

Looking ahead, Hawkins said, "The job we have before us in implementing the new Amendments is a tough one. The deadlines are tight and the stakes are high. Success in this effort will require new patterns of interaction between government on all levels and the public. A strong program for enhancing public understanding and participation will be a necessary ingredient of a formula for success. You are participants in this process," he reminded those at the conference, "and you should contribute responsibility to the task Congress has asked be carried out for the good of the nation."

He assured the conference-goers that EPA "intends to be fully responsive to the legitimate concerns of business and labor, as well as to those of the general public."

Hawkins mentioned different programs, review mechanisms, and regulation revisions that he suggested had shown EPA's responsiveness to the needs of business and industry while it also enforced the Clean Air Act.

"In contrast to the spirit of responsiveness the Agency has exhibited," he said, "I see some representatives of the business sector already preparing for a major legislative battle this year. Pursuing legislative change based upon distortion and false dilemmas, and knowing this is likely to stall efforts to adopt reasonable controls that can help clean up the nation's air, is irresponsible."

As a warning to the audience that attempts to get Congress to relax the Act would not bear fruit, Hawkins related that the history of Congressional action in order to reach the 1977 Amendments does not point to relaxation. "My advice would be that if you are looking to Congress for relief, don't," he said.

He also reminded his audience that recent public opinion polls show that Americans are strongly in favor of continued environmental cleanup efforts. "EPA is firmly convinced that the public wants more than ever the public health and environmental protection promised by the Clean Air Act."

Hawkins closed by advising the conference that disruption of the cleanup effort through legislative action would be "a major mistake." That tactic didn't work in the mid '70s and it won't work now, he maintained. "A renewed debate risks a slowdown in cleanup efforts that are reasonable and are what people want.

"The real loser will be the American public, which will be exposed to high pollution levels for more years than are necessary, when there is no major technical or economic impediment to a significant improvement in air quality.

"We at EPA feel bound to resist that kind of slowdown, and we will." ♻

FEDERAL REGISTER

JANUARY 4, 1979 - Proposed Rules: Air quality implementation plans; approval and promulgation; various States, etc.: Louisiana. Air quality implementation plans; delayed compliance: Georgia, Iowa, Louisiana, Tennessee, West Virginia (3 documents). **Notices:** Meetings: Air quality, Houston, Tex. Pesticides, emergency exemption applications: Methiocarb, Pydrin. **JANUARY 5, 1979 - Rules:** Air quality implementation plans; delayed compliance orders: Iowa. **Proposed Rules:** Air quality implementation plans; delayed compliance orders: Tennessee, Washington. **Notices:** Air programs; employer mass transit and carpool incentive program, Texas. Air programs; fuel and fuel additives: Methyl tertiary butyl ether (MTBE); application. Floodplain management and wetlands protection; procedures. Meetings: FIFRA Scientific Advisory Panel. **JANUARY 8, 1979 - Rules:** Air quality implementation plans; delayed compliance orders: Indiana, Ohio. **Proposed Rules:** Air quality implementation plans; delayed compliance orders: Connecticut, Missouri. Pesticide chemicals in or on raw agricultural commodities: tolerances and exemptions, etc.: Metolachlor; correction. **Notices:** Environmental statements; availability, etc.: Agency statements, weekly receipts. **JANUARY 9, 1979 - Proposed Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: New Mexico, Oklahoma. Pesticide programs: Pesticides, restricted use; list. **Notices:** Environmental statements; availability etc.: Agency comments.Meetings: Clean Air Scientific Advisory Committee. **JANUARY 10, 1979 - Proposed Rules:**Toxic Substances: Premanufacture or importation notification requirements and review procedures. **JANUARY 11, 1979 - Rules:** Air quality implementation plans; delayed compliance orders: Colorado, Connecticut. **Proposed Rules:** Air quality implementation plans; delayed compliance orders: Indiana. **JANUARY, 12, 1979 - Rules:** Air pollution; standards of performance for new stationary sources: Kraft pulpmills. Air pollution control, new motor vehicles and engines: Emission testing procedure. Air quality implementation plans; delayed compliance orders: Indiana (2 documents), Kansas, Kentucky (2 documents), Ohio (3 documents). Water pollution; effluent guidelines for certain point source categories: Coal mining. **Proposed Rules:** Air quality control regions; criteria and control techniques: Attainment status designations. Air quality implementation plans; approval and promulgation; various States, etc.: Maine. Air quality implementation plans; delayed compliance orders: New York. Air quality implementation plans; preparation, adoption, and submittal: Tall stacks. **Notices:** Pesticide registration, cancellation, etc.: Amitraz. Pesticides, experimental use permit applications: Farnam Companies, Inc. **JANUARY 15, 1979 Proposed Rules:** Air quality implementation plans; delayed compliance orders: Connecticut, North Carolina. **Notices:** Environmental statements; availability, etc.: Agency statements, weekly receipts. Grants, State and local assistance: Treatment works construction; patent royalties use. Pesticide programs: Pronamide. **JANUARY 16, 1979 - Rules:** Air quality implementation plans; delayed compliance orders: Illinois, Kentucky, Ohio. Air quality implementation plans; preparation, adoption, and submittal: Emission offset interpretative ruling. **Proposed Rules:** Air quality implementation plans; preparation, adoption, and submittal: Emission offset interpretative ruling. **JANUARY 17, 1979 - Rules:** Air pollution; standards of performance for new stationary sources: Wood residue-fired steam generators. **Proposed Rules:** Air quality implementation plans; delayed compliance orders: North Carolina (3 documents). Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: Inert ingredients. **JANUARY 18, 1979-Proposed Rules:** Air pollution control; recommendation for alternative emission reduction options within State implementation plans. Air quality implementation plans; approval and promulgation; various States, etc.: Texas. Pesticide chemicals in or on raw agricultural commodities, tolerances and exemptions, etc.: 6-Benzyladenine. **Notices:** Meetings: FIFRA Scientific Advisory Panel; agenda change. Science Advisory Board. Pesticide, tolerances in animal feeds and human food: Monsanto Agricultural Products Co., Rohm & Haas Co., 3M Co., et al. Pesticide programs: Triforine. Pesticide registration, cancellation, etc.: Mefluidide. Sodium salt of acifluorfen, etc. Pesticides, emergency exemption applications: Benomyl. Water pollution control: Safe drinking water; review of variances and exemptions, Mich., Minn., and Wisc. **JANUARY 19, 1979 - Proposed Rules:** Air quality implementation plans; delayed compliance orders: Connecticut. **Notices:** Federal Pesticide Act of 1978; implementation; inquiry. Toxic and hazardous substances control: Asbestos-sprayed materials in school buildings; inquiry. **JANUARY 22, 1979 - Rules:** Animal feeds: Thiabendazole. **Notice:** Environmental statements; availability, etc.: Agency statements, weekly receipts. Pesticide applicator certification and interim certification; State plans: Massachusetts. Pesticide registration, cancellation; etc.: N-Maleimide, Pesticides, temporary tolerances: Thiabendazole. **JANUARY 23, 1979 - Rules:** Air quality implementation plans; delayed compliance orders: Ohio. **Proposed Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: New Mexico. Air quality implementation plans; delayed compliance orders: North Carolina (3 documents), Ohio. Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: Chlorotoluene, Gibberellins. **Notices:** Air quality criteria: Oxides of nitrogen; extension of time. **JANUARY 24, 1979 - Rules:** Air quality implementation plans; approval and promulgation: State plans; comprehensive document availability. Air quality implementation plans; delayed compliance orders: Ohio. **Proposed Rules:** Air quality implementation plans; delayed compliance orders: Iowa. **Notices:** Pesticide registration, cancellation, etc.: Promalin. Pesticides, experimental use permit applications: Acaracide fentrifanil, etc. **JANUARY 25, 1979 - Rules:** Air quality control regions; criteria and control techniques: Attainment status designations. Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: Glyphosate. **Proposed Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: Colorado, South Dakota, Utah. Air quality implementation plans; delayed compliance orders: Ohio. **Notices:** Meetings: Drinking Water National Advisory Council, Science Advisory Board. Pesticides, emergency exemption applications: Ferriamicide (to control fire ants); inquiry; extension of time, Isopropyl carbanilate. **JANUARY 26, 1979 - Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: Connecticut, New Jersey. Air quality implementation plans; delayed compliance orders: Iowa, Maine, Washington (2 documents). **Proposed Rules:** Air quality implementation plans; delayed compliance orders: Maine, Ohio. **Notices:** Meetings: Resource Conservation Committee. **JANUARY 29, 1979 - Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: California, Louisiana, Texas. Air quality implementation plans; delayed compliance orders: Ohio. Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: Terbacil. **Proposed Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: New York. Grants, State and local assistance: Lakes, grants for restoring publicly owned fresh water. Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: Terbacil. **Notices:** Environmental statements; availability, etc.: Agency statements, weekly receipts. Meetings: FIFRA Scientific Advisory Panel. Pesticide registration, cancellation, etc.: Galltrol-A, Mercury compounds, Metolachor. Pesticides, emergency exemption applications: Metribuzin. Pesticides, experimental use permit applications: O-O-diethyl O-(2-ispropyl-6-methyl-4 pyrimidinyl); correction. Pesticides, tolerances in animal feeds and human foods:Eli Lilly & Co. **JANUARY 30, 1979 - Rules:** Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: Aldicarb. **Notices:** Meetings: Administrator's Toxic Substances Advisory Committee. **JANUARY 31, 1979 - Rules:** Air pollution control; new motor vehicles and engines: Light-duty truck class definition. Air quality implementation plans; delayed compliance orders: Maine. Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: **FEBRUARY 1, 1979 - Rules:** Air quality control regions; criteria and control techniques: Attainment status designations. **Proposed Rules:** Air pollution control, new motor vehicles and engines: Trucks and vehicles, light-duty, diesel; particulates emission standards. Air quality implementation plans; delayed compliance orders: Indiana, Ohio (3 documents). **Notices:** Pesticides; emergency exemption applications: Asulox, Permethrin (3 documents).Pydrin. Cyano(3-phenoxyphenyl)

Environmental news briefs...briefs...briefs...briefs...

Gasohol OK'd

The U.S. EPA recently decided to allow service stations across the U.S. to substitute gasohol for unleaded gasoline in its pumps.

Gasohol is a blend of unleaded gasoline and alcohol. The mix, roughly 90 percent gasoline and 10 percent alcohol, can be used directly in unleaded fuel tanks without engine modifications or loss of performance.

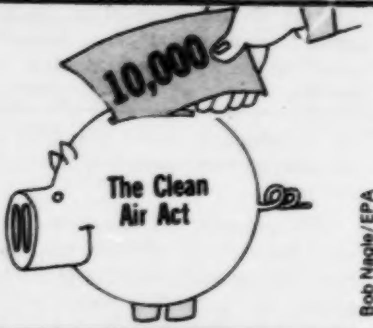
EPA will allow service stations to sell gasohol as a direct substitute for unleaded gas if they do not have the capacity for both products, and to sell it in addition to unleaded gas, capacity permiting. The effect of this ruling is that many more service stations will now be able to carry gasohol. Until now, stations with only two pumps had to sell leaded and unleaded gas and couldn't offer gasohol.

Customers are to be advised of what they are getting, however.

U.S. Steel's Black River Plant Sued

In a pollution suit against the U.S. Steel Corp., the U.S. EPA charged that the Lorain, Ohio plant is discharging wastes into public waters at 140 times the allowable limit.

The EPA has asked a Federal Court to order a timetable for the Lorain works to comply with water pollution control requirements and to impose a penalty of $10,000 for each day of violation, retroactive to August 7, 1977, the date the Clean Water Act Amendments became law.



Bob Nagle/EPA

The steel plant is daily discharging 100,000 pounds of waste into the Black River, which flows into Lake Erie. The allowable limit is 714 pounds.

U.S. Farm Land Disappearing

The nation is making headway in cleaning up its air and water but must also cope with another perplexing environmental problem — the steady loss of prime farmland, reported the White House Council on the Environment.

The loss is estimated to be four square miles a day, to residential and other uses.

"Loss of farmland of whatever class has environmental effects beyond the loss of crop-producing capacity," the report said. It noted that open lands help maintain water supplies, control storm water runoff and sediment damage, and serve as buffers for natural areas.

The Council, which was created by Congress in 1970, makes an annual report on the condition of the nation's environment and points to continuing and emerging problems.

Bob Nagle/EPA

GAO: "Many New Cars Pollute"

A quarter of all cars coming off assembly lines don't meet Federal pollution standards. More than half exceed the standards within a year, and the failure rate rapidly increases with age.

A General Accounting Office report containing that information also recommends that annual inspection programs be set up in virtually all major cities — a requirement of the 1977 Clean Air Act Amendments for areas that do not meet clean air standards by 1980. The report said that without extensive post-assembly line supervision, regulation, and inspection, auto emissions standards alone cannot clean up the air.

Benjamin Jackson, head of EPA's auto enforcement program, said the Agency 'Generally agrees with the report, and we have programs in place to deal with the problems."

Jackson said the Agency also plans an extensive public information program to inform people that tampering with emission devices does not improve fuel economy. "That is a common myth," he said.

EPA Raises Smog Limit

U.S. EPA Administrator Douglas Costle has announced a revision of the standard for ozone, a major part of the urban pollution commonly called "smog."

Costle said that "the revised standard is based on a careful reevaluation of medical and scientific evidence."

The original standard, set in 1971, allowed ozone levels of 0.08 parts per million. Of all U.S. cities with a population of over 200,000, only two meet that standard. They are Spokane and Honolulu.

EPA's most recent action changes both the primary health-based standard and the secondary welfare-based standard to 0.12 ppm. The one urban area in Region V to meet that new standard is Rockford, IL. The major population centers in the Region have ozone levels approximately twice the new standard.

There are currently 24 urban areas in the Region that have ozone levels only slightly above the new standard. Officials estimate these areas will be able to meet it by 1982, as required by the Clean Air Act, by applying reasonable control measures to their industrial and vehicle emissions.

These cities are Peoria and Rock Island IL; Fort Wayne and South Bend, IN; Lansing, Flint, and Grand Rapids, MI; Akron, Canton, Toledo, and Columbus, OH; and Madison, WI.

briefs...briefs...briefs...briefs...briefs...briefs...briefs...

Pollution "Offset" May Improve Urban Life

U.S. EPA Administrator Douglas Costle has announced changes in EPA's pollution-offset policy to help cities avoid increases in air pollution while they continue to try to attract business and industry. This action is part of President Carter's effort to revitalize and improve environmental quality in urban America.

"The major change in today's action would permit localities to 'bank' reductions in pollution beyond what is presently required, including reductions that result from firms' going out of business. These reductions, or clean air 'credits,' could later be transferred to new firms locating in the community," Costle said.

"Let's say a city with dirty air might have its pollution emissions lowered six percent by arranging for a chemical plant to control its emissions beyond present requirements. That reduction would be 'banked' for future use. Six months later, an auto company comes to town and says it wants to build an assembly plant, but the new plant would make the city's air five percent dirtier. The city could then apply its six percent savings from the chemical plant to the increased pollution from the auto company; the latter could then open for business."

For further information, or to submit comments, contact D. Kent Berry, Office of Air Quality Planning & Standards, EPA, Mail Drop 11, Research Triangle Part, NC 27711. Phone (919) 541-5341.

Spray Gets Conditional OK

The U.S. EPA has proposed conditional approval of the new pesticide amitraz for use on pears, with certain restrictions to reduce potential risks to human health.

Conditional approval means that the use of amitraz on pears would be allowed for four years, pending completion of additional lab tests by the manufacturer. After this, EPA will consider permanent registration of the pesticide.

EPA research has found that there are apparently no effective alternative pesticides available to control the pear psylla, an aphid-like insect that is capable of damaging both fruit and trees. Without amitraz, these losses to growers could be as high as $33 million during 1978 and 1981.

Because of some evidence that amitraz may cause tumors in lab animals, EPA proposes requiring application only by trained users wearing protective clothing. To reduce residue levels on the fruit before it is marketed, the agency proposes requiring longer time periods between spraying and harvesting.

EPA Rules Upheld

The U.S. Supreme Court, for the second time in three months, left intact the U.S. EPA's regulations for air pollution in Ohio.

The Justices turned down appeals by Shell Oil Co. and three Ohio utilities that were aimed at overturning the regulations as applied to rural areas.

At issue was a Federal plan, adopted by Ohio in 1976, to control sulfur dioxide, which is associated with the burning of coal.

The companies now have until October of this year to bring affected coal-burning boilers into compliance with Federal sulfur dioxide limits.

Pesticide Law Improved

Recent amendments to the Federal Insecticide, Fungicide, and Rodenticde Act (FIFRA) make EPA's regulation of pesticides more efficient, more effective, less costly, and less time consuming. Some highlights of the changes follow:

Generic Registration will occur after a single comprehensive evaluation of risks and benefits of the technical material common to numerous products based on all relevant data. In the past, each product was registered individually.

Conditional Registration allows EPA to process applications for registration of new products that are like those already registered. This is an interim process, until the complete generic registration program is in effect..

Public Access to basic health and safety data is included in the amendments.

Efficacy Data Requirements may be waived at EPA's discretion, in order to simplify the regulatory process.

State Authority is expanded to include registration of products for use within a State for "special local needs." Primary enforcement responsibility has also been transferred to the States.

Legality of Uses not addressed on the label has been an issue of past concern. The amendments relax restrictions on certain uses not listed the label, so long as those uses are in general accord with the proper use of the product.

Pronamide Review Advises Caution

Bob Nagle/EPA

The U.S. EPA has proposed that the pesticide pronamide, marketed as KERB, be allowed to continue as it is currently used, on lettuce, alfalfa, berries, turf, commerical nursery plantings, and sugarbeet seed, but with additional precautions to reduce potential risks to human health.

These additional precautions include reducing the amount of residue allowed on lettuce before it is marketed and requiring applicators to be trained and to wear protective clothing.

The risks associated with pronamide were weighed against its benefits in a full-scale review by EPA before final decisions were proposed. Public review began in May 1977, based on data showing that pronamide caused cancer in mice. These findings were confirmed during the review.

Most pronamide is used on lettuce in California and Arizona, which produce most of this country's lettuce. Without pronamide, the estimated loss to lettuce and alfalfa growers would be approximately $17.3 million.

briefs...briefs...briefs...briefs...briefs...briefs...briefs...

Town Wins in Toxic Dump Suit

The Wisconsin Department of Natural Resources does not have the power to contravene a county zoning ordinance in its administration of solid waste disposal laws, the 4th District Court of Appeals has ruled.

The decision could have great impact on the location and establishment of such sites under DNR permits.

The issue arose from an attempt bv the town of Wisconsin Dells to use a dump site purchased in the nearby town of Newton. The land had been zoned by the county for agricultural use, land, under the zoning ordiance, it could not be used as a dump unless the county board of adjustments approved.

The board did not approve the request, but Wisconsin Dells got permission from the DNR to use the site, anyway. Newton residents then took the matter to the courts.

New Waste Law in Michigan

The Michigan legislature has passed a new solid waste management act that follows Federal guidelines under the Resource Recovery and Conservation Act of 1976 (RCRA) for "cradle-to-grave" documentation. It also will regulate solid waste facilities and transportation.

The bill contains requirements for public participation in solid waste administration at the local level. Public notices will be posted prior to the licensing of any new landfill or waste disposal facility. Within the 30-day public comment period, a hearing can be requested to be held by the State.

Under the new law, county-wide solid waste plans are required to have input from the local towns and cities.

EPA Sues Two in Ohio

U.S. EPA Region V has filed two suits in U.S. District Court in Cleveland to bring about cleanup of longstanding air pollution problems. One was filed against U.S. Steel's Lorain Works and the other against Erie Coke and Chemical Company's Fairport Harbor facilities.

EPA estimates that particulate emissions from U.S. Steel's operation exceed 3,800 tons per year. This is more than six times the allowable rate.

Erie Coke and Chemical emits 113 tons per year from each of two coke oven batteries, more than five times the allowable rate.

In both cases, the Federal Government seeks a court-ordered cleanup schedule and civil penalties of $25,000 per day, retroactive to Aug. 7, 1977, the date the 1977 Clean Air Act Amendments became law.

Kids' Lead Risk Greater

Young children absorb and retain a larger portion of inhaled and dietary lead than do adults, a recent EPA-sponsored study concludes.

Dr. Robert Horton, project officer for the study, said the conclusion is based on a comparison of lead exposure and subsequent effects on parents and children, focusing on the patterns of intake, absorption, and blood-lead levels under conditions of both high and low exposure.

Copies of the report, entitled "Study of Children's Blood-Lead Levels Within Families," are available through the Library, Mail Drop 31, Environmental Research Center, Research Triangle Park, NC 27514. Phone (919) 541-2777. Refer to Report No. 600/1-78-067.

OFF THE PRESS

Water Sensor Workshop Proceedings. The EPA has published the proceedings of a Federal workshop on interagency needs for developing sensors that automatically measure water quality. The workshop was sponsored by EPA, National Oceanic and Atmospheric Administration, and the Interagency Working Group on Satellite Data Collection Systems. The proceedings (EPA-600/9/78-034) may be purchased for $10.75 from the National Technical Information Service, 5285 Port Royal Rd., Springfield, VA 22161; (703) 557-4650.

Water Quality/Quantity Study. Drafts are available of the first six chapters of the report developed in accordance with Section 102(d) of the Clean Water Act, analyzing State and Federal water allocation programs and Clean Water Act programs. The final report will be completed by the end of March. For more information contact Jerry Kotas, U.S. EPA Water Planning Division (WH-554), Waterside Mall, 401 M St. SW, Washington, DC 20460. (202)755-6965.

Ohio River Basin Study, Phase I: Interim Findings. The report summarizes the first year of a multi-university activity known as the Ohio River Basin Energy Studies (ORBES). The report assesses potential environmental, social, and economic impacts of proposed power plants and other energy-conversion facilities on a major portion of the Ohio River Basin. The document number is EPA-600/7-77-120; free copies are available from Ohio River Basin Energy Study, 133 Advanced Computation Bldg., 1011 W. Springfield Ave., Urbana, IL 61801; (217)333-1107. Interested parties may also ask to receive the ORBES Newsletter.

The 1978 Regional Data Report. This statistical portrait of North eastern Illinois deals with the latest information on land use, population distribution, school enrollment, housing, energy available, and pollution problems and solutions. It costs $7.50 and is available from the Northeastern Illinois Planning Commission, 400 W. Madison St. Chicago, IL 60606; (312)454-0400, ext. 346.

CONSTRUCTION GRANTS

Applicant	Date	Award Amount
ILLINOIS		
Beecher City	1-3	$12,150
Bloomington SD	1-26	45,000
Carterville	1-25	44,175
Lincoln	1-29	718,650
Marseilles	1-18	60,617
Shannon	1-3	3,159
Walnut	1-30	8,100
INDIANA		
Schneider	1-18	$975
Walkerton	1-23	6,675
MICHIGAN		
Antrim County	1-12	$13,125
Belding	1-22	32,400
Detroit	1-26	74,400
Dexter	1-11	1,389
Golden	1-5	12,300
Gratiot County	1-9	104,250
Iron Mountain SD	1-18	18,825
Lansing	1-30	52,275
Lapeer County	1-24	9,300
Marshall	1-4	22,360
McBrides	1-3	11,250
Port Huron	1-11	679,050
Portage Lake SD	1-23	5,025
St. Joseph County	1-23	1,536,975
Sandusky	1-4	2,375,925
Southern Clinton County	1-23	25,125
Summit	1-10	4,275
Tuscola County	1-23	1,168,650
MINNESOTA		
Babbitt	1-23	$3,900
Hoyt Lakes	1-25	42,240
Hoyt Lakes	1-26	53
Northfield	1-15	190,725
Osakis	1-11	3,000
Rochester	1-31	4,050
Rogers	1-24	280,138
Watkins	1-18	7,200
Zumbro Falls	1-10	1,050
OHIO		
Beaverdam	1-23	$54,525
Cuyahoga County	1-31	12,975
Hamilton County	1-22	530,475
Mount Cory	1-31	17,250
Mount Sterling	1-12	33,450
Obetz	1-3	23,250
Toledo	1-12	12,075
Toledo	1-18	18,024,000
Trumball County	1-25	66,600
Tuscarawas	1-18	7,500
Van Lue	1-31	25,950
WISCONSIN		
Antigo	1-18	$53,252
Boscobell	1-18	58,875
Brodhead	1-31	2,200
Brooklyn	1-29	29,250
Delafield-Hartland WPC	1-24	3,569
Dodgeville	1-24	3
Elmwood	1-25	5.175
Horicon	1-23	6,450
Howard's Grove	1-18	77
Luxemburg	1-18	3,942
Merrillan	1-25	15,825
Montello	1-29	52,950
Pewaukee	1-30	506,478
Plymouth	1-30	32,250
St. Croix Falls/Dresser MSD	1-25	17,856
Verona	1-18	5,177
Waukesha	1-12	641,615
Wrightstown	1-29	49,125

E I S COMMENTS

Sponsoring Agency Project Number Type of EIS	Project Location	Description	Summary of Comments	Comment Date
Corps of Engineers F-COE-F36015-MN (Final)	Rusford, MN	Flood control: construction of levees and road raises	Draft comments adequately addressed.	1-16-79 (Draft LO-2)
Corps of Engineers F-COE-F32038-OH (Final)	Cleveland, OH	Navigation project: widen and deepen main entrance channel	Draft comments adequately addressed. More detailed study of project-related impacts is forthcoming.	2-1-79 (Draft ER-2)
Corps of Engineers F-COE-F36054-MN (Final)	Minneapolis, MN	Lock and dam rehabilitation	Draft comments adequately addressed. Environmental reservations resolved.	2-2-79 (Draft ER-2)
Federal Highway Admin. F-FHW-F40098-MN (Final)	South St. Paul, MN	Highway construction: I-494, Bloomington to South St. Paul, MN	Wetlands concerns adequately addressed.	2-2-79 (Draft ER-2)
Dept. of Energy F-DOE-F08006-MN (Final)	Forbes, MN	500 KV transmission line	Draft comments adequately addressed.	2-2-79 (Draft ER-2)
Federal Highway Admin. D-FHW-F53009-WI (Draft)	Oshkosh, WI	Consolidation of Soo Line and CNW rail traffic	Additional information requested in regard to noise mitigation and relocation plans.	2-2-79 (Draft ER-2)

CODE: LO - Lack of objections or minor changes suggested.
ER - Environment reservations on certain aspects of project; suggest preliminary determination of impact.
2 - Insufficient information, EPA cannot fully assess project but can make further study of modifications or alternatives.

All Region V EIS Comments are prepared by the Office of Federal Activities. Environmental Impact Review Staff. For more information contact Barb Taylor at (312) 353-2307. U.S.

PEOPLE

Regional Administrator **John McGuire** has named special coordinators to work with each of the six Midwestern States. The coordinators will help strengthen the partnership between the States and the Federal government in reducing environmental pollution.

Minnesota's coordinator will be **Daniel Banaszek**, formerly Chief of the Indiana Planning Section, Water Division. A native of Chicago, Banaszek served in the Peace Corps before joining the EPA.

Mary Canavan will be working with Illinois. A Chicago native, she has worked with EPA since 1970, first as a Public Participation Specialist in the Office of Public Affairs and then as a State Program Analyst in the Water Pollution Control Grant program.

Coordinator for Ohio will be **Connie Hinckle**, a native of Canada who has been with the EPA for seven years, where she worked as a Program Analyst for the Region's Budget and Program Planning Activities. She was also an Advisor for the Administration of Grant Support for the Air, Water Quality, Drinking Water, and Solid Waste programs.

Michigan's coordinator will be **Joel Mintz**, a New York native who was previously Chief Attorney of EPA's Case Development Unit in Water and Pesticide Enforcement and a Staff Attorney in the Air Enforcement Branch. Before joining EPA, he was a legal editor for West Publishing Company. In 1978 he was awarded U.S. EPA's Special Service Award for outstanding work on the U.S. Steel case in Gary.

Sara Segal will be coordinator for Wisconsin. She has been Section Chief for the Michigan Planning Section, Water Division, for the past three years. A native of Chicago, she worked as Director of Land Advocacy for the Open Lands Project and She was the first president of Friends of the Parks, both private Chicago groups, before she joined EPA in 1974.

Indiana's coordinator will be **David Stringham**, who has been with the EPA for one year, as Water Quality Management Policy Coordinator. Before that, he was a project manager in Wisconsin with the Great Lakes Basin Commission and a lecturer at the University of Wisconsin, Oskosh. He is a native of Wisconsin.

BANASZEK

CANAVAN

HINCKLE

MINTZ

SEGAL

STRINGHAM

NOV's

Gulf Oil Corp., Cleveland, OH; gasoline loading rack, hydrocarbons.

ALCOA and Southern Indiana Gas and Electric Co., Newburgh, IN; steam coal-fired electric generating station, particulates.

Shell Oil Co., Hammond, IN, gasoline loading rack, hydrocarbons.

Defense Logistics Agency, Columbus, OH; defense construction supply center boilers, particulates.

Ashland Petroleum Co., Clarksville, IN; petroleulm transfer loading rack, hydrocarbons.

A Notice of Violation is an official warning from the Federal EPA that a source is in violation of existing air regulations.

NEGATIVE DECS

Project location	Estimated Project Cost	Potential EPA Share
Austin, MN	432,000	324,000
Apple River, IL	890	

A negative declaration is a notification to the public, prior to the grant award, that EPA believes the project's environmental impacts are not significant and that, as a result, an Environmental Impact Statement is not needed.

If you have comments or questions regarding the above projects, contact Gene F. Wojcik, Chief, EIS Preparation Section, at the Region V offices in Chicago (312)353-2157.

Impact of Nonpoint Pollution Control on Western Lake Superior

A 32-page summary of the final report on the Red Clay Project, a cooperative interstate effort to control the erosion and sediment in the Western Lake Superior Basin, specifically an effort among the soil and water conservation districts of Carlton County, Minnesota, and the Wisconsin counties of Douglas, Bayfield, Ashland, and Iron.

The project was funded with a grant from U.S. EPA's Great Lakes National Program Office.

Single copies of the report are available from Ralph G. Christensen, Great Lakes National Program Office, 536 S. Clark St., Room 932, Chicago IL 60605. Ask for EPA 905/9-79-002.

1979 calendar

March 3

Ohio Environmental Council Board meeting, from 10 a.m. to 3 p.m. at the Dawes Arboretum, 7770 Jacksontown Road SE, Newark, OH 43055. Open to the public. For more information call Sue Albrechta, (614)221-0898.

March 5-8

U.S. EPA's Industrial Environmental Research Laboratory is sponsoring the Fifth Symposium on Flue Gas Desulfurization, in Las Vegas, NV. Symposium is designed to provide a forum for presenting major advances and new developments of flue gas desulfurization (FGD), with reports and meetings on new legislation, utility and industrial combustion applications, sulfur dioxide compliance alternatives, waste disposal, and foreign FGD developments. Registration fee, $35. Contact Franklin A. Ayer, Research Triangle Institute,. Research Triangle Park. NC 27711, Phone (919) 541-6206.

March 7, 27, April 10

Water Distribution System Maintenance. One-day seminars, sponsored by the Illinois EPA. March 7 seminar at Lincoln Land Community College, Springfield, IL. March 27 at Frontier College, Fairfield, IL; April 10 at Parkland College, Champaign, Il. For more complete information or to register, contact Lou Allyn Frost, Illinois EPA, Division of Public Water Supplies, 2200 Churchill Road, Springfield, IL 62706. Phone (217) 785-0251.

March 12-13

Natural Rural Clean Water Coordinating Committee regional workshop. Exchange of views on how the Clean Water Act related program can be most effectively administered. Airport Hilton, 2500 South High School Road, Indianapolis, IN. 46241. Phone (402) 344-4231.

March 15, April 5, 11

Variances and Exemptions to the Safe Drinking Water Act, Public Law 93-523. One-evening seminars sponsored by the Illinois EPA. March 15 seminar at Environmental Resources Training Center, Auditorium, Edwardsville, IL. April 5 at Carl Sandburg College, Galesburg, IL; April 11 at Lincoln Land Community College, Springfield, IL. For more information or to register, contact Lou Allyn Frost, Illinois EPA, Division of Public Water Supplies, 2200 Churchill Road, Springfield, IL. 62706. Phone (217)785-0251.

March 15, 29, - April 2 ,12

Tastes and Odors in Potable Water Supply. One-day seminars sponsored by the Illinois EPA. March 15 seminar at the Blackhawk Restaurant, Jacksonville, IL. March 29 at the Burgess-Osborne Auditorium, Mattoon, IL; April 2 at John A. Logan College, Carterville, IL; April 12 at Frontier College, Fairfield, IL. For more information or to register, contact Lou Allyn Frost, Illinois EPA. Division of Public Water Supplies, 2200 Churchill Road, Springfield, IL 62706. Phone (217) 785-0251.

March 19-21

Symposium on Health Effects of Electric Power Generation, covering health aspects of fossil-fueled and nuclear-powered plants. William Penn Hotel, Pittsburgh, PA. Contact Dr. Edward P. Radford, Dept. of Epidemiology, Graduate School of Public Health, University of Pittsburgh, Pittsburgh, PA 15261. Phone (412) 624-3009.

April 17-20

Phosphorus Management Strategies for the Great Lakes, to assess the alternative strategies to be considered for phosphorus control in the Great Lakes and the trade-offs involved in such strategies. Participants will include State, Provincial, regional, and Federal regulatory and planning personnel, members of the International Joint Commission, members of nonprofit organizations, and interested citizens. For information contact Eleventh Cornell University Conference, 207 Riley-Robb Hall, Cornell University, Ithaca, NY, 14853. Phone (607) 256-2008.

April 24-26

21st Annual Public Water Supply Engineers Conference. This year's theme is "Safe Drinking Water by Modern Standards." Co-sponsored by the American Water Works Association. The University of Illinois, and the Illinois EPA. For information contact Dr. T.E. Larson, Illinois State Water Survey, Box 232, Urbana, IL 61801. Phone (217) 333-2214.

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April 1979

EPA ENVIRONMENT MIDWEST

Inspection and Maintenance

(story on page 2)

I & M vs. SMOG

-- The Fight For Cleaner Air

By Kent Kozina

Before the summer smog season hits, EPA's Midwest office and the regional State pollution control agencies will be developing plans to control the major smog source: the automobile.

As a part of the latest effort to clean up the air, States are developing schedules to begin automobile exhaust testing programs in areas with the worst smog problems.

"The most important pollutant problem we have in the Midwest is that related to the motor vehicle," John McGuire, EPA's Region V Administrator said. "For those cities with the greatest health risk associated with ozone and carbon monoxide, the best tool we have to reduce automotive emissions is through a regular inspection program with required maintenance, for defective vehicles putting out excess hydrocarbons and carbon monoxide."

In its 1978 annual report, the President's Council on Environmental Quality (C.E.Q.) branded ozone and carbon monoxide "the most troublesome pollutants in U.S. cities." In the Midwest, the main contributor to these pollutants is the automobile. Auto exhaust is the source of almost all the carbon monoxide, and more than half of those ingredients most important for ozone production: hydrocarbons. Hydrocarbons are found wherever paints or solvents are used: at auto manufacturing plants, oil refineries, and dry cleaners. Some are produced naturally, from such sources as rotting vegetation. But these natural hydrocarbons contribute very little to urban ozone problems. The big boost to metropolitan ozone levels is provided by hydrocarbons in automobile exhaust whenever the driver floors the accelerator. Cut back on these, and the fair-weather plagues of city-bred ozone can be effectively stifled.

Reducing hydrocarbons has been the main strategy for controlling ozone since a Los Angeles researcher first discovered ozone's recipe. Take one part nitrogen oxide (found wherever internal combustion engines are operating), add about ten parts hydrocarbon (available in the form of inefficiently burned auto fuel or evaporated solvents), cook for a few hours in a relatively stable air mass under hot sunshine, and you've got it: the brew that made Los Angeles infamous. The relationship between ozone and hydrocarbons is noted in the CEQ annual report: From 1973 to 1976 the nationwide release of hydrocarbons into the air decreased by 6.4 percent, from 29.8 to 27.9 million tons per year. The same period saw severe ozone violations decline an average of 6 percent in 12 representative cities.

Hydrocarbons are abundant in our atmosphere. Some are produced naturally from such sources as rotting forest humus. Scientists estimate that natural sources can contribute as much as .04 parts per million to the ozone concentration. That means a third of the national standard can come from natural sources alone, which explains why it does not take much additional pollution from the city to bump the ozone levels into the harmful range.

States are currently at work to achieve enough reduction in hydrocarbons to starve the ozone-forming process. Wisconsin, Illinois, Michigan, Ohio, Indiana and Minnesota have developed regulations controlling most industrial and commercial sources of hydrocarbons. These sources are but half the problem, however; in many of the largest metropolitan areas, EPA calculates that these reductions will not be enough to significantly control ozone formation by the Federal deadline of 1982. In these areas, States in cooperation with local and regional governments, will need to address the larger problem of reducing hydrocarbons from automobiles.

The Federal government began the drive to clean auto exhausts with the Clean Air Act of 1963. As a result, all cars manufactured in or imported into the United States since 1968 have had to comply with increasingly tighter automobile emission control standards for hydrocarbons, carbon monoxide and nitrogen oxides. Manufacturers have, for the most part, met these tighter standards through revised engine specifications and the addition of emission control devices. However, according to State and EPA studies, this new car control program is failing to keep a lid on excessive automobile hydrocarbon and carbon monoxide emissions. Automobiles that roll off the assembly line "clean" are not remaining that way, because of widespread tampering, fuel switching, and insufficient maintenance of pollution controls. U.S. EPA estimates that about 80 percent of the 100 million vehicles on the road are not meeting

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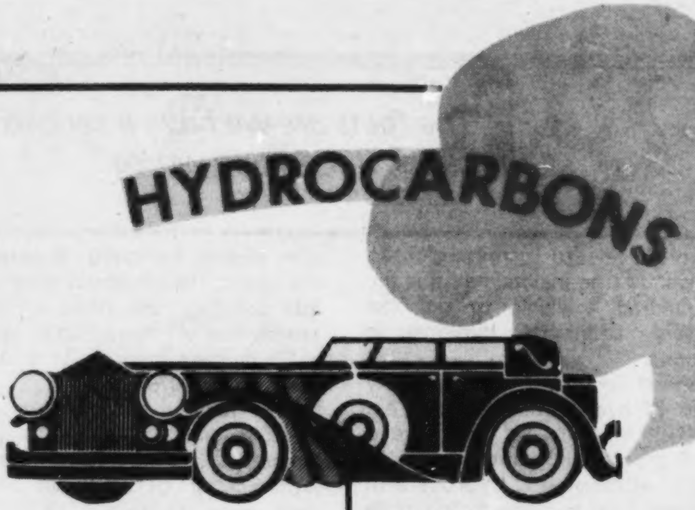


Air Pollution Level Phone Numbers

Chicago	(312)644-9090
Milwaukee	(414)453-8943
Minneapolis-St. Paul	(612) 296-7263
Indianapolis	(317)639-9003
Cleveland	(216)771-3313
Cincinnatti	(513)352-4886
Dayton	(513)223-3222
Columbus	(614)466-8979

Representative Ozone Standard Violations 1973-1978 US EPA Region V

Chicago:	.265 ppm
Detroit:	.262 ppm
Milwaukee:	.257 ppm
Cleveland:	.230 ppm
Cincinnatti:	.222 ppm
Indianapolis:	.200 ppm

(ppm - parts per million)

Federal air quality standards.

"These problems are going to have a big impact on emissions." Steve Hoover of EPA's Mobile Source Enforcement Division said. "Calculations based on these rates of tampering and poor maintenance indicate that these vehicles would be subject, at the end of 50 thousand miles, to emissions at least four times higher than the standards they were designed for."

"Where necessary, car inspection and maintenance (I & M) programs are the answer," concluded the U.S. General Accounting Office in a recent report to the Senate subcommittee on environmental pollution. "Inspection programs offer a comprehensive way to identify and correct maintenance and other emission problems."

The Clean Air Act Amendments of 1977 require urban areas with populations greater than 200 thousand to begin an I & M program if, by 1982, they still expect to violate public health standards for ozone and carbon monoxide. According to State estimates completed thus far, the following metropolitan areas in the Midwest are not expected to have sufficiently clean air by 1982: Chicago and East St. Louis, Illinois; Milwaukee, Wisconsin; Gary, Hammond, Indianapolis, and the Louisville interstate area, Indiana; Detroit, Michigan; Cleveland, Cincinnati, Youngstown, and Toledo, Ohio; and Minneapolis, Minnesota. These areas and perhaps additional ones, are likely candidates for an I & M program.

In areas where such programs already are operating, the measured hydrocarbon reductions have been substantial. In Arizona, which began its program in 1976, tailpipe emissions of hydrocarbons were reduced an average of 41 percent in one year. New Jersey and Portland, Oregon also have reported large hydrocarbon reductions from their inspection and maintenance programs.

State and local air quality planners recently gathered at EPA's mobile test facilities in Ann Arbor to review a recent analysis of the Portland I & M program. The EPA study was designed to evaluate the costs and benefits of a typical operating exhaust testing program, and is based on tests of 600 cars of varying model type and year. One hundred 1972-74 models and one hundred 1975-77 models were included in each of three samples: one sample of cars that passed the Oregon idle emissions test, another sample that failed, and a third sample from a Eugene, Oregon control group of cars that went untested. The failed vehicles were repaired at a service station of the owner's choice and at the owner's expense.

Although the study is only half complete, the preliminary analysis found:

— Large emission reductions after maintenance. Cars that initially failed the test polluted from 33 to 54 percent less after normal maintenance. Most corrective maintenance consisted of minor tune-up work, carburetor adjustments, or air filter replacements.

— Catalyst-equipped cars improved more than non-catalyst cars. Although test cars manufactured after 1974 were cleaner than older cars to begin with, after maintenance their average hydrocarbon levels fell an additional 44 percent. Maintenance of these failed cars also resulted in an average carbon monoxide reduction of 53 percent.

— Repair costs for failed vehicles averaged $24 for 1975 and newer models and $35 for pre-1975 models. Fifty percent of all failed cars had repair costs of $14 or less. For the 70 percent of the cars that passed the inspection, the only cost was the $5 inspection fee.

EPA spokesman Gary Gulezian estimated the inspection fees in the Midwest would run from $5 to $8, depending on the type of program. In Wisconsin, the legislature is considering a program in which the inspections would be paid for from tax revenues. To lessen the cost impact on the poor, States may exempt cars from repair if the cost will exceed a predetermined limit. The Minnesota Pollution Control Agency, in its program design, has proposed that such a cost limit be a percentage of the estimated value of the car.

Additional consumer protection is provided by the Clean Air Act Amendments in the form of emission control warranties. According to David Feldman of the Mobile Source Enforcement Division, EPA will have regulations in effect by the 1981 model year that will enforce a warranty covering defects in any auto part that can contribute to high emissions, for up to 12 months or 24 thousand miles. This warranty also will cover, for up to five years or 50 thousand miles, any part which is exclusively for the purpose of emission control, such as a catalytic convertor.

EPA's McGuire recognized that the program could cause some in-

"The facts are we have a serious problem, and in the cities, it's getting worse"

convenience to metropolitan motorists, but he maintainted it is the best method available to get the necessary additional hydrocarbon reductions.

"Planned controls on stationary sources of hydrocarbons already are very tight," McGuire said. "If we are to see any progress in the most polluted areas, additional hydrocarbon reductions have to come from mobile sources."

Pubic Support

In areas where I & M programs are operating, the public has demonstrated support for them. A Phoenix, Arizona survey done last spring found that 56.8 percent of the 470 respondents favored continuing that emissions testing program. While support was evident in all age and education categories, people under 30 years of age voted most often (66 percent) in favor of the program.

"The testing program itself may be a minor irritant to a number of people," Phoenix Chamber of Commerce executive Jim Haynes said, "but it is an extremely vital element in our local efforts to maintain the quality of life Arizona residents have always enjoyed."

A similar survey in New Jersey found 83.9 percent of 3200 respondents disagreed with the recommendation that their vehicle inspection program be eliminated. The results are not surprising, considering that the auto exhaust testing program, in combination with Federal new car standards, helped to reduce carbon monoxide in New Jersey by 26 percent in three and one-half years.

Stubborn Pollutant

While levels of most other major air pollutants have improved considerably in the past few years, ozone has proved more stubborn. According to a recent EPA report, ***National Air Quality, Monitoring and Emission Trends Report, 1977,*** the national ozone trend was basically stable from 1972-1977. California, which has led the nation in tough controls on hydrocarbons from industry and new automobiles, showed a decreasing trend of ozone levels, while non-California sites slightly increased. According to the report, the beneficial effect of the less polluting cars rolling off the assembly line largely has been offset by a 30 percent increase in travel distances since 1970.

"The facts are, we have a serious problem, and in cities, it's getting worse," Dr. Bertram Carnow, Professor of Occupational and Environmental Medicine at the Unviersity of Illinois School of Public Health, said. "Ozone is probably the worst, or most dangerous, of all the common pollutants; it is extremely reactive material."

The reactive nature of ozone results from its unique chemical makeup. Each ozone molecule is composed of three atoms of oxygen; the normal oxygen molecules we breathe are composed of only two atoms of oxygen. As such, ozone is like a "super oxygen," which accelerates the deterioration of materials much the same way oxygen fans a destructive fire.

ELECTRODE - MAINTAIN PROPER GAP - KEEP CLEAN

SPARK PLUGS ignite the air-fuel mixture in the cylinder. If a plug is dirty or worn, you lose engine power, and waste fuel and emit high HC.

Plants are extremely sensitive to the gas. Studies have demonstrated a 20 percent decrease in soybean yields (a $6 billion crop nationwide) when exposed to high levels of ozone.

Rubber is quick to disintegrate under the influence of ozone. The paper wrapped around tires sold at gas stations helps to prevent ozone from cracking the rubber.

Ozone harms lung tissue in much the same way it attacks rubber. It reduces the elasticity of the cells and causes premature aging of the respiratory system. It inflames the lining of the bronchial tubes that filter out harmful particles from deep within the lung. Besides narrowing the air passages and making it more difficult to breathe, this bronchial inflamation increases the likelihood of lung infection.

"Car inspection and maintenance programs are the answer."

Studies of healthy young adults have documented the effects of ozone. When ozone levels were high, a Los Angeles study found long-distance runners invariably posted slower times. Young nurses complained of headaches, eye irritation, and coughing as levels increased.

In tests involving animals, higher levels of ozone have resulted in chromosome breakage, scarring of lung tissue, and the inability of the body to resist infectious bacteria. While such animal studies cannot be directly related to ozone's expected effects on humans, they do suggest the possible dangers in increased ozone levels.

"Pre-existing diseases such as asthma, emphysema, and chronic bronchitis are clearly aggravated by ozone exposure," said Dr. Thomas Godar, President of the the Connecticut Lung Association. "It's conservative to say that about ten percent of the population has some form of chronic lung disease." These estimated 20 million people suffer greatly when ozone levels go up.

The national standard of .12 parts ozone per million parts of air recently was set as a result of health effects studies on humans. Widespread violations of this standard have been found throughout the Midwest, virtually wherever an air quality monitor was present. The highest levels, often twice the standard, were found in suburban areas just outside of metropolitan hubs of industrial activity and automobile traffic. In Illinois, for example, the highest ozone readings

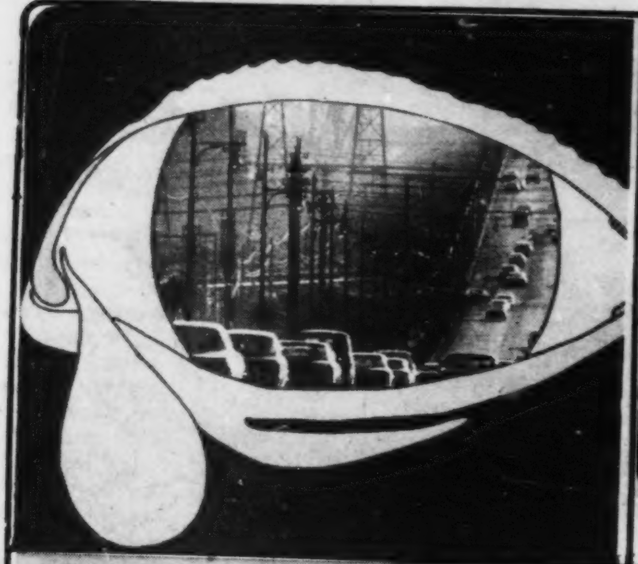
> *"Society has to make a decision about how many people it is prepared to sacrifice for things that may be convenient."*

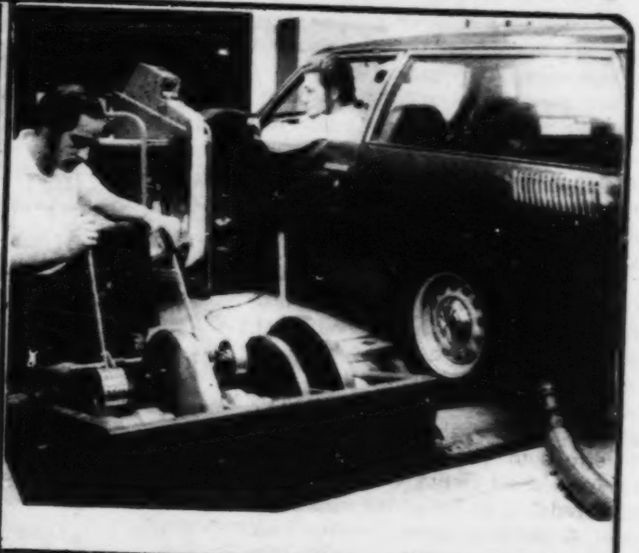
consistently were recorded 10 to 20 miles downwind of Chicago. Since ozone is formed when hydrocarbons and other pollutants react in the presence of sunlight, there can be a delayed reaction that makes ozone pollution worse in outlying areas than in the cities, where most of the hydrocarbons are generated. Ozone is truly a regional problem, and requires a regional solution.

"Just as we've done something about the stacks, we've got to do something about the automobile," Dr. Carnow said. "This may be inconvenient, but it is also inconvenient for people to die from emphysema and heart disease."

"Society has to make a decision about how many people it is prepared to sacrifice for things that may be convenient," Dr. Carnow said. "Higher ozone levels will produce a hardier population, fulfilling Darwin's postulates, and the fittest will survive; but I think, in a country where you have 20 million allergic people, 10 million asthmatics, 70 million smokers; where a large portion of your population is either very young or very old, then you're playing the game of Russian Roulette and you can't win."

Failure to deal with the ozone problem can indeed be a dangerous gamble, with public health as the stakes. But a well-implemented and effectively enforced automobile inspection and maintenance program can improve the odds considerably.





WHAT TO DO IN CASE OF AN AIR POLLUTION EPISODE

The air pollution committee of the American Academy of Allergy has these recommendations for asthmatics in case of high ozone levels:

-- Avoid unnecessary activity
-- Avoid smoke and smoke-filled rooms
-- Avoid exposure to dust, sprays (such as the hair or insect variety) and fumes
-- Avoid exposure to persons with colds and respiratory infection
-- Remain indoors in a clean environment--use air conditioners or charcoal filter devices if available
-- If it appears the episode will subsist, leave the area of contamination
-- Ask your physician to develop a specific procedure to follow in case of an air pollution alert (such as proper medication)

Rural Pollution Solution? --BMPs

By W.W. Reid

When they think of pollution, most people think of cities; the smog, the garbage, the unswimmable, unfishable waters, and all the rest.

But Carl Wilson, EPA's Nonpoint Source Water Pollution Control Coordinator for Region V, says that agricultural water pollution is, at least in terms of quantity, a bigger problem and more difficult to control than urban water pollution.

"On a nationwide basis, there are over 145 million pounds of suspended solids brought into our waterways per day from nonpoint sources." He went on to explain. "Nonpoint source pollution is simply pollution without a particular, identifiable point of origin. There is both urban and rural nonpoint pollution, but most of the point sources tend to be in the cities. Industrial discharge pipes or the outflow from sewage treatment plants are good examples of point source pollution."

But rural nonpoint source pollution isn't as easy to get a handle on, as Wilson pointed out. "Let's say we test a stream and find that it's badly polluted — so much nitrogen, so much phosphate, high fecal coliform count, and so on. We cannot then go back up the stream or any of its countless tributaries and identify a given, specific feed lot or a particular pasture and say for sure that this is the point from which the pollution came. Nonpoint source pollution is generalized in origin."

The time the pollution occurred can be as difficult to determine as the point of origin. Many variables are involved: the use to which a particular piece of land is put at any given time of year, the weather patterns over a period of days, months, or even years, and many other factors, all applied to a watershed that may cover many square miles.

As a result, water pollution from animal waste in pastures and feed lots, from pesticides and fertilizers applied to crops, and general soil erosion, all place a heavy burden on America's waterways.

Mining and construction sites can also be important nonpoint pollution sources, but under certain circumstances agricultural land uses continue to pose the major problem.

"...because Region V States represent some of the great agricultural areas of the nation, the nonpoint problem tends to be greater here than elsewhere."

"Nonpoint source pollution is definitely a problem nationwide," Wilson said. "But because Region V States represent some of the great agricultural areas of the nation, the nonpoint problem tends to be greater here than elsewhere."

There are ways to deal effectively with nonpoint pollution. The key techniques are based on sound soil conservation principles. In essence: protect the land and you'll not only protect your productive resource but you'll also protect the water. The techniques favored by EPA are known as "Best Management Practices" or BMP.

"BMPs can be broken down into three categories," said Wilson, "but it's really kind of a philosophical distinction, because the first category of BMPs is so important, that if you

don't use those, the others won't really do that much good."

Wilson explained, "The best BMP is maintaining good *ground cover.* We don't mean by this that all agricultural land should be planted in grass, but we do encourage farmers to leave as much ground cover as possible when they work their fields."

The kinds of plows that completely turn over and bury the vegetation set the stage for increased erosion and water pollution. Tillage should be kept to a minimum.

"Minimum tillage or 'low-till' plowing is the next best thing to the no-till procedure," said Wilson. "Low-till techniques keep the soil disruption to a minimum but still allow the farmer to work the soil enough to be sure water gets through. A chisel plow is good for this — it doesn't turn the soil over, just breaks up the ground enough to let water in."

If a farmer can maintain good ground cover, that's considerably more than half the battle, Wilson emphasized. "The second category of Best Management Practices has to do with special water transport areas. A grassed waterway is one example." A grassy gully is better than an open ditch or even a paved canal, Wilson maintained. But a proper transport system can only make a good situation better; if the ground cover on the field isn't there, pollution will be too great for a grassy ditch to have much impact on the problem.

"The third type of BMP has to do with catchment systems." Wilson continued. "A good catchment system, such as a dam system, will keep a lot of sedimentary pollution from reaching the open streams. But that catchment basin, collecting ten tons of sediment per acre of farmland per year, will eventually fill up, and then you have a whole different problem. Besides, that runoff material probably should never have come off the fields in the first place. It doesn't really belong in a catchment basin, it belongs on the land."

Wilson said that more needs to be known about the exact relationship between various BMPs and actual water pollution reduction before they can be most effectively used. "Anyone who detects a certain level of pollution in a stream and then says, 'I can guarantee an exact reduction of this pollution to such-and-such a level by applying this BMP' doesn't know the full story. At this stage of our understanding, the cause and effect relationships are simply not clearly known in detail. But through a careful examination of long-term effects and trends, we will be able to project more accurately what will happen when a particular BMP is applied."

> *"We can save the taxpayers a great deal of money through Best Management Practices applied on a prioritized basis."*

"The key to many of our present research efforts is modeling," Wilson explained. "This technique will simulate, by computer, storms and their associated runoff occurrences and make predictions as to what is likely to be the biggest water quality problem in a given area. This judicious use of computers is the most cost-effective problem solving approach to the problem presently available."

He added, "Setting priorities is very important. If we can deal with the highest priority areas, then we can clean up a lot of pollution relatively cheaply. We can save the taxpayers a great deal of money through Best Management Practices applied on a prioritized basis." Continuing research will enable those working on the problem to match the appropriate BMPs to the highest priority areas.

A promising research effort to determine which BMPs work best in Region V is the Black Creek Project, in Allen county, Indiana.

"Concerned citizens met down in the Ft. Wayne area to discuss the problem of agricultural pollution," Wilson recalled. "Later meetings were attended by legislators and EPA representatives. There were some 70 people involved. Funds were made available through Section 108 of the Clean Water Act. Because the farmers down there wanted an honest evaluation of what sort of pollution was coming off of their farms, we were able to establish contracts involving some 170 farm families, working in a 12,000 acre watershed. They have contracted to use certain Best Management Practices and the results are being carefully studied. It's an excellent program, with 95 percent of the farmers in the area participating."

The Black Creek Project, and others like it, such as the seven Model Implementation Projects around the nation, funded through Section 208 planning agency grants and funds from Agriculture Department, will eventually enable planners to match the most appropriate BMP to the particular nonpoint water quality problem to be dealt with. Then the water planning agencies will be able to look forward to the day when country streams are really as clean as they are typically thought to be.

SANDERS TO HEAD S&A

Region V Administrator John McGuire has selected William H. Sanders III as the new Director of the Region's Surveillance and Analysis Division.

"I am particularly pleased that Bill Sanders will be directing Surveillance and Analysis," said McGuire. "His past performance in the Water Division, both as Deputy Director and as acting Director for several months, shows that he has a firm grasp of the challenges facing the Environmental Protection Agency and that he is fully able to take over this new position and provide S&A with the sort of leadership that will be required."

Sanders' previous position was Deputy Director of the Region's Water Division. He came to EPA in 1973 and worked with the Construction Grants staff of the Water Division before becoming Unit Coordinator of the Minnesota/Wisconsin unit in the Planning Branch.

He replaces Christopher Timm as Director of S&A. Timm will be working with the World Health Organization in Switzerland.

A 1969 graduate of the University of Illinois, Chicago Circle Campus, with a B.S. in Civil Engineering, Sanders first worked for the Army Corps of Engineers, where he participated in a major study of the impact of municipal wastewater on Lake Michigan and the Illinois waterway system.

Surveillance and Analysis is primarily a support division, providing the monitoring and laboratory work for the Enforcement Division, the Air and Hazardous Materials Division, and the Water Division. S&A also provides supervision of ambient monitoring programs for both air and water by State agencies.

In addition, S&A is in charge of EPA's Environmental Emergency Section, consisting of personnel prepared to respond to emergency spills 24 hours a day.

Sanders said he plans to give special attention to the Quality Assurance Office, which provides certification of the States' drinking water laboratories.

"This quality assurance effort is something I'm going to be taking a very close look at, since this is the type of program that has been receiving a very high priority at the national level," he said.

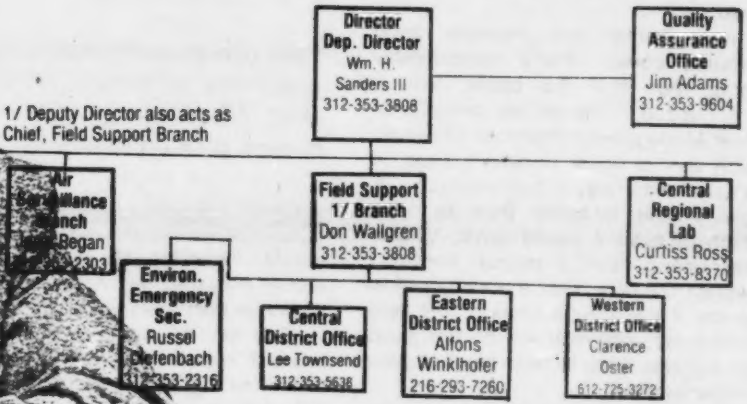
Sanders said he also plans to give a high priority to maintaining the highest levels of communication between S&A and the programs it supports. "It is absolutely essential that there be a complete exchange of all necessary data so that operations in the field can be sure of giving the programs exactly what they need."

A native of Chicago, Sanders is married and has four children.

In anticipation of working with a new division, Sanders said, "I've been very impressed with the talented people I've met in the division, and I'll be looking forward to working to further develop that talent and put it to the best use."

Photo by Leah Wilson

Photo by Leah Wilson



U.S. EPA, SURVEILANCE & ANALYSIS DIVISION - ORGANIZATION CHART

UPDATE:

ASBESTOS IN SCHOOLS

The Region V office of the U.S. EPA has launched a comprehensive assistance program to help the six Midwestern States deal with possible health hazards caused by deteriorating or damaged sprayed-asbestos surfaces in schools.

"To help identify, eliminate or contain asbestos hazards in schools and other buildings, EPA is mailing asbestos information to State and school officials. This information explains how to identify damaged material containing asbestos, evaluate the risk, and correct or contain the problem," said John McGuire, EPA Midwest Regional Administrator.

"Prior to 1973, the interiors of many public, commercial, and other buildings were routinely sprayed with materials containing asbestos for fireproofing, insulation, or decoration," said McGuire. "Our major concern is with schools, where damaged or deteriorating ceilings and other asbestos-coated surfaces may expose a large number of children to airborne asbestos fibers."

"The asbestos hazard in schools is real, but not widespread," Dr. Lyman Condie, a pharmacologist-toxicologist with EPA's Region V office, said. "Although more than 20 percent of Midwest schools probably contain asbestos-sprayed material, the percentage of children that may actually be exposed to an asbestos hazard is relatively low — one to five percent." He emphasized that asbestos is dangerous only when asbestos-sprayed material is damaged and asbestos fibers are released into the air. "Once the fibers get into the lungs through the nose or mouth, they stay there for life," Condie said. "Asbestos fibers are very hard to detect inside the body, and they're virtually indestructible."

EPA banned the use of asbestos sprays for fireproofing and insulation in 1973, and in 1978 it outlawed asbestos sprays used for decorative purposes.

A Regionwide EPA technical meeting on asbestos will be held in Chicago, IL on April 23, 1979, from 10 a.m. to 4:30 p.m. in the Windsor Room of the Pick Congress Hotel, 520 S. Michigan Ave., phone (312) 427-3800. In addition, EPA's Midwest office has scheduled public meetings on asbestos hazards, to be held in the following cities:

IMPORTANT DATES

Chicago, IL	April 23	2:00-4:00 p.m.	Pick-Congress Hotel, Buckingham Room 520 S. Michigan Ave. Chicago, IL 60605 (312) 427-3800
Columbus, OH	April 27	10-12:00 a.m.	Stouffer's University Inn 3025 Olentangy River Rd. Columbus, OH 43202 (614) 267-9291
Detroit, MI	May 2	10-12:00 a.m.	Howard Johnson (downtown) 231 Michigan Ave. Detroit, MI 48226 (313) 965-1050
Minneapolis, MN	May 3	10-12:00 a.m.	Curtis Hotel 327 S. 10th Minneapolis, MN 55404 (612) 340-5300
Milwaukee, WI	May 10	10-12:00 a.m.	Midway Motor Inn (airport) 5105 S. Howell Ave. Milwaukee, WI 53207 (414) 769-2100

EPA toll-free numbers to call for more asbestos information are: in Illinois (800) 972-3170; in Indiana, Michigan, Minnesota, Ohio, and Wisconsin, (800) 621-3191. Toll-free calls may also be made to EPA in Washington, DC at (800) 424-9066.

EMERGENCY SUSPENSION OF 2,4,5-T

In a very unusual action, the EPA has declared an immediate halt to most uses of the herbicide 2,4,5-T and its closely related counterpart, silvex.

The decision to suspend use of the herbicide was based on animal test results and the high level of miscarriages among women in the Alsea Basin area of Oregon, shortly after the chemical was sprayed there.

While the major use of 2,4,5-T in Region V is along power line rights-of-way, Regional Administrator John McGuire noted that Midwest consumers and homeowners may have silvex products around the house for lawn care use. McGuire warned that "existing stocks should be secured safely out of reach and in accordance with storage instructions on the products' labeling until EPA issues a final order after expedited suspension proceedings conclude."

McGuire also emphasized that distribution, sale, or use of a suspended pesticide is illegal, and could result in stiff penalties.

The emergency suspension was necessary because the spring spraying season is scheduled to begin soon, and an estimated four million people nationwide could have been exposed to the herbicides. The suspension applies to use of 2,4,5 -T in forests and pastures, and along power lines and highways. It also applies to silvex, a weed killer used on lawns. Use of these herbicides will be permitted on rice fields and on sparsely populated rangeland, where there is less human exposure.

This decision doesn't ban the herbicide permanently. Such a step would involve extensive public hearings, and could take longer than a year.

Dow Chemical and ten other manufacturers and users of 2,4,5 -T appealed EPA's suspension order in Federal court on March 7. That motion was dismissed by the court. Numerous chemical manufacturers have requested expedited hearings from EPA. Those hearings are expected to begin by the end of March, and could last for up to 3 months.

1979 calendar

APRIL 12, 19, 30
The Illinois Section of the American Water Works Association and the Illinois EPA, co-sponsor one-day seminars on taste and odor in drinking water, from 8:45 a.m. until 4:15 p.m., the following dates and locations: April 12, Frontier Community College, Classroom # 45, RR 1, Highways 15 & 45 West, Fairfield, IL 62837; April 19, Belleville Area College, Theatre, Main Campus - 2nd Floor, 2500 Carlyle Road, Belleville, Il 62221; April 30, Blackburn College, Private Dining Room, Carlinville, IL 62626. Contact Ms. Lou Allyn Frost, Illinois EPA, Div. of Public Water Supplies, 2200 Churchill Road, Springfield, IL 62706. Phone (217) 785-0251.

APRIL 17-20
Phosphorus Management Strategies for the Great Lakes, to assess the alternative strategies for phosphorus control and the trade-offs involved. Participants will include State, Provincial, regional, and Federal regulatory and planning personnel, the International Joint Commission, nonprofit organizations, and interested citizens. For information contact Eleventh Cornell University Conference, 207 Riley-Robb Hall, Cornell University, Ithaca, NY, 14853. Phone (607)256-2008.

APRIL 17
The State of Illinois Pollution Control Board has scheduled a public hearing on proposed amendments to sulfur dioxide and particulate emissions regulations, 10:30 a.m. at the Student Center, University of Illinois, Chicago Circle Campus, 750 S. Halsted Street, Chicago. For further information, contact the Hearing Officer, Roberta Levinson, Pollution Control Board, 309 W. Washington St., Suite 300, Chicago, IL 60606. Phone (312) 793-3620.

APRIL 21
Municipal construction grants for sewage treatment seminar sponsored by the Izaak Walton League of America, under an EPA grant to improve citizen participation. To be held in the Student Union Building, Indiana-Purdue University Campus, Coliseum Blvd. East. From 9 a.m. to 3:30 p.m. Phone Karen Greggs, (219) 837-4154.

APRIL 23, 27, MAY 2, 3, 10
Regionwide technical assistance meetings for school officials seeking to deal with *asbestos hazards* in schools and other public buildings. These public meetings will be held in the Midwest as follows: Chicago, IL, April 23, Pick Congress Hotel; Columbus, OH, April 27, Stouffer's University Inn; Detroit, MI, May 2, Howard Johnson (Downtown); Minneapolis, MN May 3, Curtis Hotel; Milwaukee, WI, May 10 Midway Motor Inn (Airport; For further information, contact EPA, Region V, 230 S. Dearborn St., Chicago, IL 60604, phone (800) 972-3170. In Indiana, Michigan, Minnesota, Ohio and Wisconsin, call (800) 621-3191. Both numbers are toll-free.

APRIL 24-26
The 21st Annual Public Water Supply Engineers Conference on Safe Drinking Water by Modern Standards, in Champaign, sponsored by the American Water Works Association, the University of Illinois Dept. of Civil Engineering, and the Illinois EPA. For further information, contact Dr. T. E. Larson, Illinois State Water Survey, Box 232, Urbana, IL 61801.

APRIL 25
Public Hearing on Indiana's State Implementation Plan (SIP), at the State Board of Health, Indianapolis, beginning at 1:00 PM. A hearing was held on February 25 on the Indiana SIP, but the plan has been changed extensively since then, requiring a new hearing. The plan includes State regulations to control industrial emissions and commitments to review various transportation strategies to improve air quality. For more information, call Kent Kozina, EPA Region V Air Division, (312)353-2072.

APRIL 30
Deadline for written comments on proposed changes to the Illinois Pollution Control Board Water Pollution Regulations. For further information, phone Stephen Ewart, Hearing Officer at the Board's Springfield Office, (217) 782-9755. Copies of the proposed changes from Ms. Christan Moffett, Clerk of the Illinois Pollution Control Board, 309 W. Washington St., Suite 300, Chicago, IL 60606.

MAY 1-2
Symposium on Analytical Methods to Monitor Product Compliance with Regulations, designed to enable manufacturers of paints and other surface coatings to meet pollution regulations. Sponsored by the Paint Research Institute. For reservations, contact Dr. Raymond R. Myers, Kent State University, Chemistry Dept., Kent, OH 44242.

MAY 4-6
The 27th Annual Outdoor Education Conference, held at the Lansing School District Environmental Education Center, sponsored by the Michigan Outdoor Education Association. For registration information, contact Dave Cross, 3426 S. Cedar, Lansing, MI 48910. Phone (517) 374-4344.

MAY 14-15
White House Rural Water Conference; Bismark Hotel, Chicago, IL. The last of ten such regional meetings to be held across the country, the conference will focus on the recent interagency agreements announced by President Carter in December, 1978 concerning rural water and sewer problems. The agreements and new procedures to be followed will be explained. For more information, call Roger Coppock, EPA Region V Water Division, (312)353-2072.

PEOPLE

Terry Hoffman, former Environmental Affairs Director for the Minnesota Department of Transportation (MnDOT), is the new Executive Director of the Minnesota Pollution Control Agency. She was appointed recently by Governor Al Quie. Hoffman replaces **Sandra S. Gardebring**, who will replace **Jim McDonald** as EPA's Region V Enforcement Director.

Louis J. Breimhurst, formerly Director of the National Pollutant Discharge Elimination System Permit Program in Minnesota, was named as Hoffman's Deputy Director.

Georgia Carr will be filling a new position created in the Springfield Department of Public Health for the purpose of dealing with noise complaints and educating area residents on the effects and abatement of noise pollution. The position is partially funded by EPA. Carr is a retired 30-year employee of Sangamon Electric, participating in a pilot program administered by the Senior Community Service Employment Program and EPA. In the program, senior citizens play a key role in implementing noise control programs at the local level.

WAPORA, Inc., an environmental and energy studies firm has named **E. Clark Boli**, formerly director of the company's Chicago regional office, to take charge of WAPORA's Western Operations, based in Chicago, Seattle and Anchorage.

James O. McDonald, Region V enforcement director for U.S. EPA, received the Agency's highest honor, the Distinguished Career Award, from Region V Administrator **John McGuire** in a presentation ceremony March 23rd. McDonald served as the Region's enforcement chief for eight years and has been credited with leading the EPA fight against pollution in the Midwest. He is leaving the Agency after over 20 years of Federal Services.

TERRY HOFFMAN

SANDRA S. GARDEBRING

NOV's

- Ohio Youth Commission, Powell, OH; coal-fired boiler; particulates.
- Piqua Municipal Power Plant, Piqua, OH; particulates.
- U.S. Steel, Lorain, OH; particulates.
- Michigan Standard Alloys, Benton Harbor, MI; aluminum smelting facility; particulates.
- Rookwood Oil Terminals, Inc., Cincinnati, OH; loading rack; hydrocarbons.
- Landmark, Inc., Dayton, OH; loading rack; hydrocarbons.

A Notice of Violation is an official warning from the Federal EPA that a source is in violation of existing air regulations.

208

208 Water Quality Plans Approved

U.S. EPA Region V has announced the approval of seventeen locally-developed plans for long-range water quality management. The goal of the planning program, established under Section 208 of the Federal Water Pollution Control Act of 1972, is to eliminate polluting discharges into the nation's surface waters. As an interim goal, the Act seeks a national standard of water quality that promotes recreation and protects fish and wildlife. There are thirty-seven of these 208 plans being developed throughout the Region.

All 14 of Michigan's plans were approved. The planning agencies, their locations, and the approval dates are: **Michigan** Central Upper Peninsula Planning & Development (CUPPAD), Escanaba, MI, 3/19. East Central Michigan Regional Planning Commission, Saginaw, MI, 3/19. Eastern Upper-Peninsula Regional Planning & Development Commission, Sault-Ste. Marie, MI, 3/19. Genessee-Lapeer-Shiawassee Planning & Development Commission, Flint, MI 3/19. Northeast Michigan Council of Governments (NEMCOG), Gaylord, MI, 3/19. Northwest Michigan Regional Planning & Development Commission, Traverse City, MI, 3/19. Region 2 Planning Commission, Jackson, MI, 3/19. Southcentral Michigan Planning Council, Nazareth, MI, 3/19. Southeast Michigan Council of Governments (SEMCOG), Detroit, MI, 3/19. Southwestern Michigan Regional Planning Commission, St. Joseph, MI, 3/19. Tri-County Regional Planning Commission, Grand Rapids, MI, 3/19. West Michigan Shoreline Regional Development Commission, Muskegon, MI, 3/19. Western Upper Peninsula Planning & Development Commission, Houghton, MI, 3/19.

Ohio

Ohio-Kentucky-Indiana Regional Council of Governments (TMACOG), Toledo, OH, 3/27 Eastgate Development and Transportation Agency (EDATA), Youngstown, OH, 3/27.

NEW TECHNOLOGIES AT WORK

By W.W. Reid

America's many pollution problems are being dealt with in a variety of ways. Some solutions are simple: cut down on unnecessary use of the automobile, for example. Others call for more complex approaches — technology has an increasing role to play.

Region V's Office of Research and Development keeps track of the latest scientific research in the pollution control field. Through EPA's Technology Transfer program, information on the most promising developments are passed along to those who can best utilize them — State and local governments or private industry.

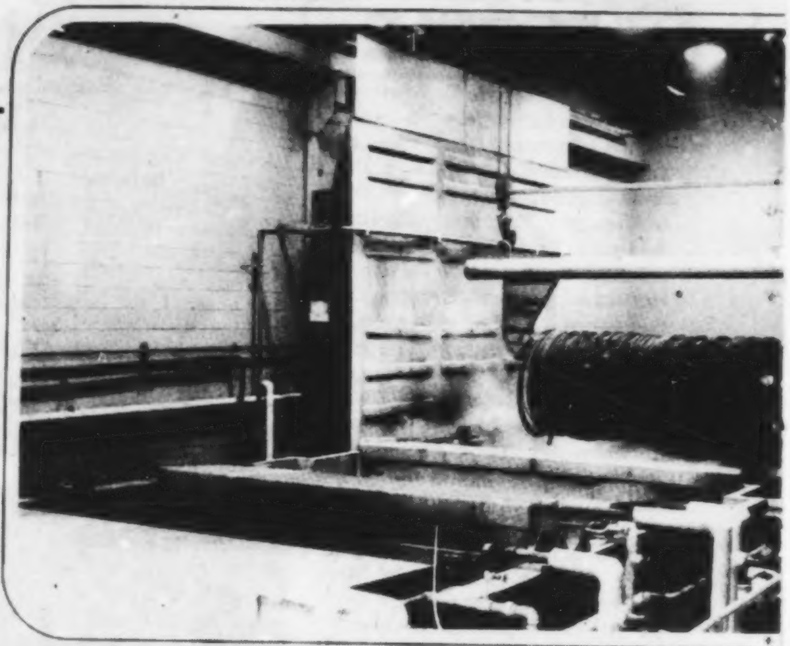
R&D reviews these developments and conducts Technology Transfer seminars to make the latest information available to those who can take advantage of it.

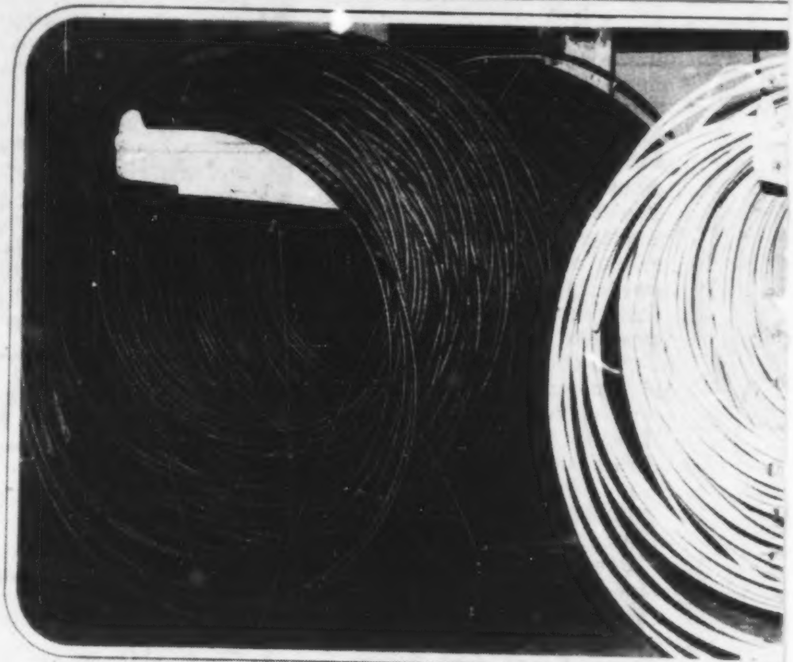
Clifford Risley, Region V's Research and Development Director, is also Technology Transfer Chairman for the Region. He explained that every new research development is not automatically passed along to those with problems to solve, no matter how promising that research may be.

"We take the position," said Risley, "that new theories and concepts need to be clearly established as workable in the field before being recommended to those who will have to make an investment in the process."

When significant new procedures or equipment are developed and can be used by those in the field, the information is made available through various Technology Transfer publications and through seminars. Upcoming seminars will deal with such things as new techniques for controlling air pollution during the manufacture of paint and other surface coatings; nonpoint source water pollution; and alternative techniques for sewage treatment.

Wire rod entering pickling operations





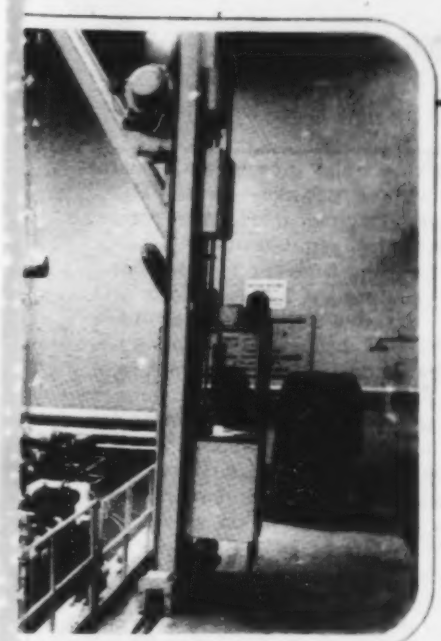
Wire rod before pickling (left), wire rod after pickling and lime coating (right)

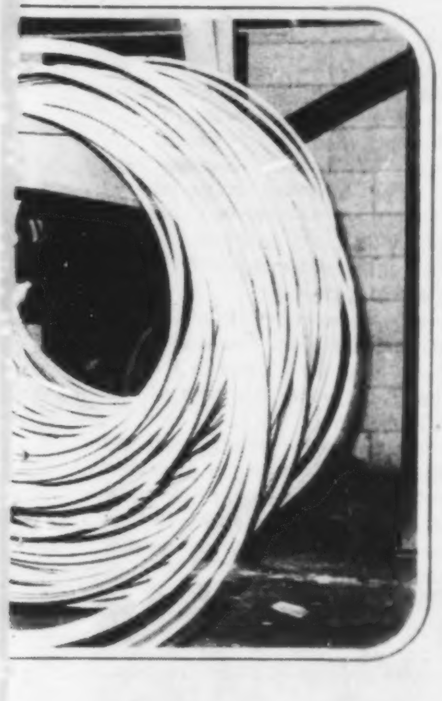
A new facility in Dawson, Minnesota may be the answer to many of the problems that have hindered the effective operation of small sewage treatment plants. Since plants treating less than one million gallons of sewage per day make up more than 70 percent of the plants in the nation, the operation at Dawson could have wide impact.

The major advantage of the Dawson plant is its simplicity. Rather than a series of different tanks for different phases of the sewage treatment process, with all the attendant pumps and valves, Dawson consists primarily of a single oval channel. Combination pump/aerators at one end of the oval keep the wastewater moving fast enough to keep solids from settling out.

After an average of 35 hours of this aerating circulation, the liquid moves through two clarifiers before chlorination and discharge. Sludge is removed during aeration and at both clarification stations and returned to go through the process again. Excess sludge is eventually removed from the system and trucked to nearby farmland

Through EPA's Technology Transfer program, information on the most promising developments are passed along to those who can best utilize them —





where it is spread. This is done about every three months.

The system should prove especially attractive to small communities for three reasons:

- Effective treatment of wastewater is accomplished without large numbers of skilled attendants. Four to six hours of basic caretaker work per day are all that the system normally requires. Operating expenses are low.
- The aeration channel level can vary greatly and still enable the system to work effectively. At a normal operating depth of between three and four feet, the channel can accomodate a wastewater surge of 83,000 gallons. In most small facilities such surges usually result in a raw sewage overflow and discharge.
- The Dawson technique results in removal of 90 percent of the nitrogen pollutants in the wastewater, without the use of expensive chemicals.

The technology on display at Dawson demonstrates a reliable, flexible, and cost-effective sewage treatment approach that may have application all over the nation.

Pickled Steel

Approximately 100 million tons of steel are produced annually in the U.S. Most of that production takes place in Region V. A new development in steel processing may help small manufacturers solve a major pollution problem: disposal of sulfuric acid.

In the processing of the steel, the oxidized reddish-brown scale that accumulates on the ingots, sheets, rods or whatever must first be removed. The usual procedure for this is called "pickling." The steel is dipped in an acid-filled vat and the scale is dissolved. The majority of the nation's steel processors, small secondary finishing plants for the most part, use sulfuric acid in the pickling process.

Approximately 375 million gallons of sulfuric acid is used in this process and must be safely disposed of.

Manufacturers can neutralize the acid with a base substance such as lime or soda. Handling and disposal of the resulting sludge can be a difficult and time-consuming process.

A method of disposal, such as deep well injection, where the spent liquor is injected into the earth to be left there between impervious layers of rock, is not a [illegible]st effective process for most smaller manufacturers. The deep-well procedure is a complicated and time-consuming engineering feat and therefore has limited application for smaller operators.

Some manufacturers sometimes resort to contract disposal. Outside firms are hired to haul and dispose of the spent liquor. This technique really only passes the problem along to the contractor, with the added expense of transportation and handling thrown in.

One way to minimize the problems caused by these three marginally acceptable means of disposal is to recover and reuse the sulfuric acid. Acid recovery can save America's small steel producers a lot of headaches.

In order to return the sulfuric acid to a reusable condition, the dissolved iron in the pickle liquor must be removed. This can be done by cooling the liquor. At between 35 and 59 degrees F., the dissolved iron will crystalize. The crystals can then be filtered out of the liquor, which can then be reused, usually after being fortified with some fresh sulfuric acid.

The crystals, ferrous sulfate, can be marketed, which further reduces the disposal problem, while helping to offset processing costs.

"It's a bird...it's a plane..."

Determination of the microscopic content of materials on the ground while flying a thousand feet overhead may sound like a job for Superman and his x-ray vision. But the task is actually being performed by perfectly ordinary EPA technicians flying around Region V in an airplane using infrared photography to check for defective sewer and septic tank systems.

The infrared photos can indicate the presence of surface ponding of sewage. Contaminated areas will show up under thermal infrared because sewage-contaminated water is warmer than clean water. Color infrared can also be used to spot telltale color differences, even if the difference occurs in an area of the spectrum beyond the range of the human eye.

Using aerial infrared photography in this way enables EPA to check most areas for pollution at a fraction of the cost that would be incurred if all the necessary teams were sent out to cover the same area making on-site inspections.

Areas that are indicated by the photography as polluted must still be given an on-site inspection, but the savings in time and money in doing the initial checking by air is enough to gladden the heart of the most parsimonious taxpayer. ♻

Cleanup Help Available

By W.W. Reid

Small Business Administration

A wide variety of programs are available from Federal, State and local agencies for helping just about anybody finance pollution cleanup efforts.

EPA is expanding its capacity to assist businesses in financing pollution cleanup.

This Federal assistance is available to small and large private firms, farmers, and communities. In addition, many States provide various forms of financial assistance.

The basic guidelines for any of these programs are the same:

- The programs are intended to deal with particular situations and will be considered on a case-by-case basis.
- The programs are designed to help those firms that are at a financial disadvantage in meeting pollution control expenses.
- The programs are intended to help applicants that would be able to continue in a viable state, were it not for the additional expense of pollution equipment or procedures.

The Small Business Administration is a major source of this assistance. Loans are available to eligible businesses, farmers, and feedlot operators who are in financial need because of pollution control expenses.

SBA offices have complete criteria for the determination of a firm's status as a small business.

EPA must certify that the equipment or procedure for which the loan is requested is necessary and sufficient for bringing the firm into compliance with environmental regulations. A firm may be eligible for such a loan if the funds are needed to meet any of the following conditions:

- if the business has an effluent discharge requiring a National Pollution Discharge Elimination System permit under Section 402 of the Clean Water Act.
- if the business emits discharges through a sewer line into a publicly-owned treatment system worked in a city or town that requires the pretreatment of waste discharge.
- if the business plans to discharge into a municipal sewer system through the construction of a lateral or interceptor sewer.
- if the business is subject to State or regional requirements on controlling the disposal of pollutants that may affect groundwater.
- if the business must obtain a U.S. Army Corps of Engineers permit for disposal of dredged or fill material.
- if the business is subject to Coast Guard or State government requirements regarding the standard of performance of marine sanitation devices controlling sewage from vessels.
- if the business is implementing a plan to control or prevent the discharge or spill of oil or other hazardous substances.

The SBA is also authorized to make loans for air pollution control and expenses incurred under the toxic substances regulations. Small Business Act legislation does not specifically provide for these sorts of loans, but the Small Business Administration has issued an administrative decision allowing loans for those purposes.

Amendments to the Small Business Act also authorize the Small Business Administration to provide financial assistance for expenses incurred in dealing with noise pollution, as well as air and water pollution.

Eligibility for Small Business financial assistance is best determined by the nearest SBA Office, but four general guidelines apply to obtaining assistance for pollution control:

- the business must be independently owned and operated, not dominant in its field, and qualify under SBA rules as a small business.
- the business must be at an operational or financial disadvantage with other business concerns regarding either the planning, design, or installation of pollution control facilities or the obtaining of the financing needed to do so.
- the business must have been in operation for at least five years, and profitable during any three of the last five years preceding the date of the application.
- the business must provide evidence (usually from a pollution control regulatory agency) of the need for the facilitiy, and its ability to help prevent, reduce, abate, or control pollution or contamination.

Economic Development Administration

The Economic Development Administration (EDA), a branch of the U.S. Department of Commerce, is concerned with stimulating economic development and industrial growth, especially in economically depressed areas of the country. Pollution control *per se* is not specifically designated as one of EDA's functions, but businesses can still use EDA assistance in meeting pollution regulations.

If the firm in question is in an area designated by EDA as "low-growth" and that firm is likely to contribute to that general economic depression in an effort to meet pollution regulations (because of layoffs caused by curtailed operations or outright shutdown of the facility, for example), then an EDA loan may be called for.

EDA grants are also available to States and local governments in areas where business shutdowns or curtailments would have a serious effect on the local economy. The fact that those business disruptions may be even partially the result of firms' having to comply with pollution regulations does not have any bearing on the community's eligibility for the grants. Once affected communities receive their grant funds, they can make loans to businesses that need assistance in meeting environmental expenses or the communities may establish public works projects that will aid in improving the local environment.

U.S. Department of Agriculture

Rural communities and farms can be helped to meet their environmental cleanup expenses through a variety of programs.

The Agriculture Stabilization and Conservation Service (ASCS) of the U.S. Department of Agriculture administers the Agriculture Conservation Program (ACP). The ACP is the primary means the Federal government has of assisting farmers in meeting the expense of soil, water, woodland and wildlife conservation requirements. Most of the pollution abatement problems dealing with farmlands are closely related to — and usually solved by — effective soil conservation measures.

Establishing protective soil cover, controlling destructive run-off, reducing sedimentation of waterways, water conservation, prudent pesticide and fertilizer application, all are fundamental principles in proper farmlands management, as well as basic rural pollution control techniques.

Funds for controlling stream pollution from animal waste caused by runoff from feedlots or grazing areas are included in the ACP. The soil Conservation Service (SCS) has developed engineering plans to deal with the problem and SCS can provide technical assistance to compliment the funding available from the ACP.

SCS also manages the Rural Clean Water Program in conjunction with water quality management plans organized and administered according to Section 208 of the Clean Water Act.

Farmers Home Administration

Family-size farms can receive loans or loan guarantees from the Farmers Home Administration (FmHA). Funds from FmHA can be used for the purchase or development of farms, acquisition of farm structures, or purchase of livestock or equipment. If these expenses are necessary for pollution control, FmHA is still able to provide the funds to eligible farmers. Any legal entity, including individuals, partnerships, public and private organizations, and Federally recognized Indian tribal groups, may be eligible.

The loans can be made only for use in legitimately rural areas. Cities of 50,000 or more or urbanized areas with a population density of more than 100 persons per square mile do not qualify as rural areas in this case.

Besides the family-size farm loan program, FmHA can provide grants for the financing of specific projects or programs needed to develop, store, treat, purify, or distribute water or to collect, treat and properly dispose of waste in rural areas. Grants are available for rural towns (less than 10,000 population) for construction of water and waste disposal facilities.

Any grants or loans for water development or waste treatment facilities can only be used for projects that are consistent with any development plans of the State or regional planning agency, counties, or municipalities in which the proposed project is to be located.

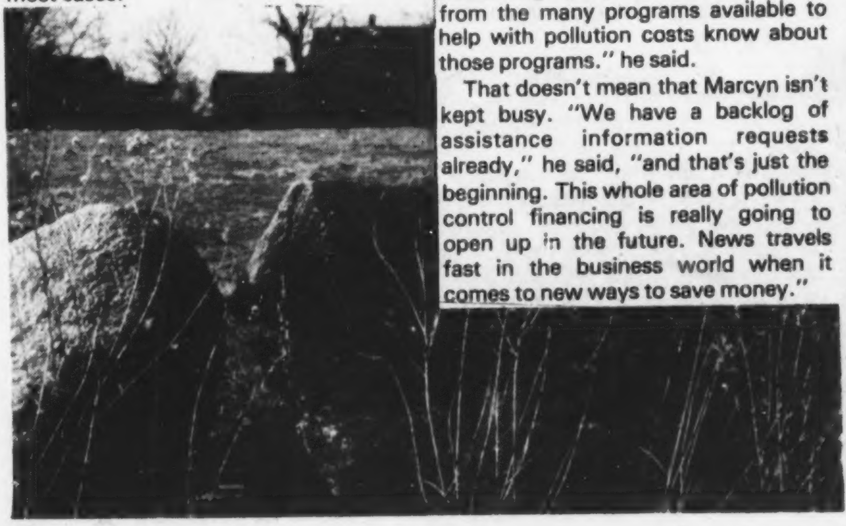
Industrial Development Bonds

Aside from the various grants and loans available from all these sources, financial assistance is available in a less direct, but no less beneficial form: tax incentives. Whereas many of the previously mentioned programs (especially those offered by SBA and FmHA) serve to assist small businesses, many of the tax credit plans can aid the nation's largest firms.

The Federal government has authorized State and local governments to sell industrial development bonds to underwriters who in turn sell them to investors. The revenue from these bonds must be spent on air and water pollution control equipment and programs.

These pollution bonds may be attractive to investors because bond issues are tax exempt when the amount sold is not more than $1 million, or when the total capital expenses of the facility being financed do not exceed $5 million.

In effect, a State or local government is offering for sale tax exempt revenue bonds based on the credit of the business in need of the pollution control financing. The bonds are redeemed by a trustee for the business. Until redemption, the State or local government is nominal owner of the company property. Capital is made available for pollution control, thereby increasing the viability of the business, which stands surety for the investment — a tax-free investment in most cases.



Rapid Amortization

Perhaps the most readily accessible and widely used form of financial assistance comes in a form familiar to most Americans: the tax "write-off." Officially designated as "rapid amortization," this accounting procedure allows an investor in pollution equipment to recover the cost of the equipment by declaring it to depreciate in value at a more rapid rate than would ordinarily be allowed. This "write-off" of pollution control expenses enables businesses to soften the impact of major capital investments.

Chester Marcyn, Region V's Certification Coordinator for financial assistance applications, pointed out that most of the Midwest's business leaders seem to prefer getting their financial assistance through the tax man than by seeking loans and grants. "By far the largest number of applications are from those seeking certification of rapid amortization and investment tax credit," he said. "There doesn't seem to be — at least from my experience — as much interest in small business loans and the like."

Marcyn said this preference for using tax procedures for recouping pollution control expenses might be because larger businesses have accountants trained to seek out such financial assistance, whereas smaller businesses simply haven't found out about some of the programs available.

"The word needs to get out more — not enough people who could benefit from the many programs available to help with pollution costs know about those programs." he said.

That doesn't mean that Marcyn isn't kept busy. "We have a backlog of assistance information requests already," he said, "and that's just the beginning. This whole area of pollution control financing is really going to open up in the future. News travels fast in the business world when it comes to new ways to save money."

Information on Financial Assistance for Pollution Cleanup

Chester Marcyn — U.S. EPA, Region V Certification Coordinator for financial assistance applications, 536 S. Clark, Chicago, IL 60605, (312) 353-2316.

Sheldon Sacks — Environmental Protection Agency, Office of Analysis and Evaluation, WH-586, 401 "M" Street SW, Washington, DC 20460.

John Ritch — Director, Industry Assistance Office, Office of Toxic Substances, TS-799, 401 "M" Street SW, Washington, DC 20460. The Industry Assistance Office provides a toxic substances information toll-free telephone — (800) 424-9065.

Small Business Administration, Office of Special Guarantees, 1441 "L" Street NW, Washington, DC 20416, (202) 653-6889.

Council of Pollution Control Financing Agencies, James H. McCall, President, 10960 Wilshire Blvd. Suite 1806, Los Angeles, CA 90024. (213) 479-3895.

Economic Development Administration, Office of Business Development, U.S. Department of Commerce, Washington, DC 20230.

Conservation and Environmental Protection Division, Agricultural Stabilization and Conservation Service, U.S. Department of Agriculture, Washington, DC 20013.

Donald Moreau, Executive Director, Indiana Department of Commerce, 332 State House, Indianapolis, IN 46204, (317) 633-4450.

Donald L. Duster, Director, Illinois Department of Business and Economic Development, 222 South College, Springfield, IL 62706, (217) 782-7500.

SBA Field Offices:

Regional Office — Federal Building, 219 South Dearborn St., Room 838, Chicago, IL 60604, (312) 353-0355.

District Office — Federal Building, 219 South Dearborn St., Room 437, Chicago, IL 60604, (312) 353-4528.

Branch Office — One North, Old State Capital Plaza, Springfield, IL 62701, (217) 525-4415.

District Office — 1240 East 9th St., Room 317, Cleveland, OH 44199, (216) 522-4180.

District Office — Federal Building, U.S. Courthouse, 85 Marconi Blvd., Columbus, OH 43215, (614) 469-6860.

Branch Office — Federal Building, 550 Main St., Cincinnati, OH 45202, (513) 684-2314.

District Office — 477 Michigan Ave., McNamara Building, Detroit, MI 48226, (313) 226-6075.

Branch Office — 540 W. Kaye Ave., Don H. Bottum University Center, Marquette, MI 49855, (906) 225-1108.

District Office — 575 N. Pennsylvania St., Room 522, New Federal Building, Indianapolis, IN 46204, (317) 269-7272.

District Office — 122 W. Washington Ave., Room 713, Madison, WI 53703, (608) 252-5261.

Branch Office — Federal Building, Room 246, 517 E. Wisconsin Ave., Milwaukee, WI 53202, (414) 291-3941.

Port of Duty — 500 S. Barstow St., Room 89AA, Federal Office Building and U.S. Courthouse, Eau Claire, WI 54701, (715) 834-9012.

District Office — 12 S. 6th St., Plymouth Building, Minneapolis, MI 55402, (612) 725-2382.

News...News...News...News...Around The Region

"News Around the Region" is a new section of updates on news events and environmental programs in Region V States. Where "Environmental News Briefs" focus primarily on U.S. EPA activities, this section will cover State agency milestones, State legislation, notable local events, and, occasionally, a national story significant to the Region.

Illinois

- 1978 was a record year for oil and chemical spills handled by the Emergency Unit of the Illinois EPA. The Unit acted on 435 incidents, a 24 percent increase over the previous year.
- Commonwealth Edison's Dresden plant near Morris, IL will be the first in the nation to undergo "decontamination," starting this month. At a cost of $36 million, this process will remove a buildup of radioactive metal oxides collected in the cooling system. The fuel rods will be removed and 85,000 gallons of caustic solvent will be added to the cooling water and forced through the five miles of pipe.
- The city council of Calumet City gave unanimous approval to an ordinance banning 24 toxic substances from manufacturing plants in the city. This action is aimed at avoiding incidents like the one on January 9, when a leak of 2,500 gallons of acrylonitrile forced the evacuation of several thousand local residents.

Indiana

- The Public Health Committee of the Indiana State legislature is considering a bill to repeal the State's six-year ban on phosphates in household laundry detergents. At the same time, the State Board of Health has found that the ban has resulted in a 30 percent reduction in phosphorous concentrations in streams and a 60 percent reduction in sewage. These figures represent healthier, cleaner streams and cheaper sewage treatment. Direct your comments on the phosphate ban to: Rep. Don Nelson, Chairman, Public Health Committee, 569 King Dr., Indianapolis, IN 46260.
- A recent survey of Indiana farmers by Prairie Farmer magazine shows that nearly 80 percent of the State's farmers are concerned about the safety of chemicals they use on their crops.

Michigan

- The bill to protect Michigan's wetlands is being amended in committee, prior to its introduction in the legislature. The fact that the long-delayed bill has reached the Senate committee's agenda is hailed by the Detroit Free Press as proof that "the climate for conservation (in the legislature) is radically changed."
- A bill has been introduced in the State House to officially enact a phosphate detergent ban. A ban is presently in effect under Department of Natural Resources (DNR) regulations, but is in litigation brought by opponents. A State law is seen as a way to resolve that problem.
- "Michigan's dirtiest waterway," Ecorse Creek near Detroit, will start to get cleaned up by a huge retention basin now being constructed. The basin is designed to eliminate basement flooding and prevent raw sewage from backing up into the creek during heavy rains.
- Governor Milliken has signed emergency rules to begin Michigan's solid waste program. The governor decided not to wait for the legislature to act on permanent rules, which usually takes about six months. The new law, which does not cover hazardous waste, is based on Federal guidelines and increases DNR control of planning, handling, and disposal. The first deadline under the new rules was February 28, when all refuse handlers had to be licensed.
- A special nine-member committee to review lawmakers' proposals dealing with hazardous waste disposal has been appointed in the Michigan House. The committee will review proposed legislation and resolve conflicts. Presently, no county in the State allows burial of hazardous waste.

Minnesota

- The 42 truckloads of herbicide-polluted snow that resulted from a January 6 fire at a chemical warehouse have finally found a home — on the farm of a State official's neighbor. State Agricultural Commissioner Mark Seetin announced that he's not afraid to have it in his own backyard, and that's exactly where he'd put it if it wasn't a conflict of interest. Seetin, frustrated after seven weeks of efforts to dispose of the snow before it melted, had some critical words for people who have blocked previous plans. The problem, Seetin said, is that Minnesotans accept the low-priced abundant food produced with chemicals but won't accept any problems related to handling pesticides. "It's time we learned to solve the technological problems of Minnesota in Minnesota," he said.

Ohio

- Ohio's Bottle Bill is in the process of final hearings in committee. The Bill would require a 10-cent deposit on every beverage can and bottle.
- The State's hazardous waste management bill went into effect March 19. The bill is patterned after Federal guidelines and regulates hazardous waste "cradle to grave."
- There is growing concern that Governor James Rhodes does not really want Ohio utility companies to be forced to burn Ohio coal, the Cincinnati Post reports. There is some speculation that Rhodes will not follow through on the Section 125 action, although it was undertaken at his request.

Wisconsin

- A special legislative committee is expected to reach a consensus soon to aid the Wisconsin Solid Waste Authority in starting its first facility. The Authority has been stalled since 1974 by a requirement that the facility break even from the start. The legislative committee is considering abolishing that requirement, as well as recommending a "sunset" date, by which the facility would have to be underway or lose it $20 million funding.
- Governor Dreyfus has announced the formation of a 250-member committee to gather public comments and information for a review of the Dept. of Natural Resources (DNR). Former State Representative John Gower has been named to head the committee. Fifty local coordinators, who will each select four more local panel members and work on public hearings in their area, have also been selected. Members include environmentalists, housewives, attorneys, and local business owners.
- A new service to answer questions about environmental issues has been set up by the University of Wisconsin and the State government. It's called the Environmental Information Network, and through it citizens will be referred to experts who answer their question. Contact: Mark Hendrickson, c/o University of Wisconsin Extension, Environmental Resources Unit, 1815 University Ave., Madison, WI 53706. Telephone: (608) 262-1658.

Environmental news briefs...briefs...briefs...briefs...

Thompson Requests Coal Hearing:

Governor Thompson of Illinois has requested that President Carter hold hearings in that State on the question of whether utilities should use out-of-State, low-sulfur coal. Public hearings held last summer failed to show that serious unemployment among local miners would result if coal was imported, but Thompson wants the matter re-examined.

The new public hearings would be held under Section 125 of the Clean Air Act, which is meant to prevent economic disruption as a result of clean air standards. An order under 125 can require utilities to burn local coal if significant economic disruption is found to result from importing coal. If local high-sulfur coal is burned, utilities will then have to install "scrubbers" to remove the sulfur from their emissions in order to meet clean air standards.

In his letter to Carter, Thompson requested that Federal officials "investigate the ripple effects of pollution-control decisions on a Regional or National scale." Thompson also met with Governor Rhodes of Ohio, Governor Bowen of Indiana, and Governor Ray of Iowa on State energy problems.

The situation in Illinois is similar to the one which occurred recently in Ohio, where hearings were held and significant economic disruption was attributed to coal imports.

DNR Forces Chemical Cleanup

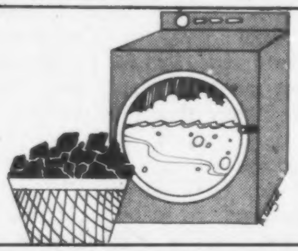
In keeping with U.S. EPA's efforts to resolve hazardous waste problems, the Michigan Department of Natural Resources (DNR) has filed suit to force Hooker Chemical and Plastics Co. to clean up extensive underground toxic wastes that have contaminated water supplies around the company's plant in Montague.

The lawsuit doesn't seek a specific amount for damages, but State officials estimate the cleanup costs could exceed $15 million. That would be the largest sum ever sought in a U.S. court for restoration of land polluted by toxic wastes. The State is also asking the court to impose punitive fines and order Hooker to repay the State for any irreversible environmental damage.

U.S. EPA, which funds Michigan DNR's hazardous waste management program, has met with Hooker and the State to discuss disposal and cleanup alternatives. EPA has also been asked by the State to review cleanup plans, and has pledged its continuing support to take environmentally sound corrective action at the site.

"Laundered" Coal May Reduce Sulfur

Columbus and Southern Ohio Electric Co. and the U.S. EPA have reached an agreement in principle that will allow the utility to continue burning coal mined in Ohio but "washed" to comply with Federal air pollution control standards. C&SOE would implement a coal-washing strategy to reduce the sulfur content of Ohio coal. EPA has been negotiating with Ohio utilities to develop and agree on ways for them to meet clean air standards without resorting to use of low-sulfur Western coal.



EPA Enforces Pretreatment Regs For the First Time

A Regional, and perhaps national, first occured on March 9, 1979, when Region V's Enforcement Division issued a Notice of Violation (NOV) to the city of Battle Creek, MI, for failure to comply with wastewater pretreatment regulations. The regulations (40 CFR 403) became effective on June 26, 1978, and the NOV was issued under authority granted by Section 309 (f) of the clean Water Act.

The NOV cited a 2,500-pound chromic acid spill from Eaton Corporation, an industrial contributor, as the source of pollution. Battle Creek officials, according to Federal regulations, have 30 days from the date the NOV was issued to come up with an acceptable compliance schedule. Failure to do so will lead to further EPA legal action.

EPA Sues Three for Air Cleanup

Three suits have been filed in Federal courts to bring about cleanup of continuing air pollution problems. These suits were brought at the request of the Region V office of EPA, in Chicago, against Knauf Fiber Glass Co. in Shelbyville, IN; Ford Motor Co., in Cleveland OH; and Chrysler Corp., in Indianapolis.

The Knauf facility is emitting particulates at the rate of 225 tons per year. The allowable limit is 69 tons per year.

The particulate emissions from Ford's five coal-fired boilers are more than twice the amount allowable. This is especially significant because the area surrounding the facility is already in violation of particulate standards.

The complaint against Chrysler's electrical plant for excessive hydrocarbon emissions has been assigned to the same Federal judge that is handling Chrysler's June, 1977 suit to keep EPA from requiring the plant to meet pollution control standards. Hearings have been held on that suit, but no ruling has been issued.

In all three court actions, EPA is requesting a court ordered cleanup schedule, and fines of up to $25,000 per day of violation.

Jobs Saved in Wheeling

The U.S. EPA, the States of Pennsylvania, West Virginia, Ohio, and the Wheeling Pittsburgh Steel Corporation — the eighth largest steel producer in the U.S. — have reached a major agreement on a program to bring the company into compliance with air and water pollution control regulations.

The agreement, which covers all the company's plants, will protect nearly 15,000 jobs in these three States, EPA Administrator Douglas Costle said.

The agreement will mean compliance by all Wheeling-Pittsburgh plants between now and 1982 with all present clean air and water standards. This is the first multi-State, company-wide agreement EPA has reached with a steel company.

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Minnesota to Manage Federal Funds

The State of Minnesota has assumed primary management of Federal funds earmarked for municipal sewage treatment plant construction, EPA Region V has announced.

The Minnesota Pollution Control Agency (MPCA) will be responsible for administering more than $1.6 million in initial Federal grants through January, 1981, which will enable the State to provide 75 percent funding for publicly awarded waste water treatment facilities that help achieve national clean water goals.

The EPA-MPCA agreement, signed by Regional Administrator John McGuire and MPCA Executive Director Terry Hoffman in St. Paul, is the third such agreement in the Midwest Region. Illinois and Wisconsin assumed primary management of the programs in those States in 1978.

At the signing of the agreement turning over management of the construction grants program to Minnesota are (l. to r.) EPA Region V Administrator John McGuire, MPCA Executive Director Terry Hoffman, and Minnesota Governor Al Quie.

Photo by Birute Bulota

Garbage Put to Use

Eleven cities in Region V are now eligible for grants to develop resource recovery projects.

EPA Region V Administrator John McGuire estimates that 10 million people will benefit by these grants. "These monies will help communities find alternatives to the often unpopular landfills. Urban areas can begin to view their solid waste as a resource, rather than as a problem to be buried or burned." McGuire said.

The grants program, part of President Carter's Urban Policy, will provide funds for feasibility planning, financial arrangements, and market studies for projects such as recycling of paper, glass, and aluminum, or recovery of energy from solid waste.

The eleven cities selected are: Chicago and Rockford, IL; Indianapolis, IN; Detroit, Flint and West Michigan, MI; St. Paul, MN; Cuyahoga County (Cleveland), Montgomery County (Dayton), and Toledo, OH; and Wausau/Stevens Point, WI.

These communities will share the $15 million program with 57 other areas across the country.

Emergency Fuel Measures Set

Governors of the Region V States have been advised by EPA's Regional office of the emergency relief measures available in case of an oil crisis. The Federal Clean Air Act provides for a temporary suspension of clean air standards, should an emergency occur.

Although the East Coast relies more heavily than the Midwest on imported oil, it is possible that during a shortage certain industries or utilities may not be able to obtain the exact quality or quantity of oil necessary to comply with a State's clean air standards.

Under the Clean Air Act, there has to be a definite demonstration that the need for suspension of clean air standards exists. The Act also says that the public must be given an opportunity to take part in the suspension process. "These safeguards insure that consideration for public health is given full weight in the necessary balancing of environmental and energy concerns," McGuire said.

Barium Studies Reviewed

Preliminary findings have linked barium in drinking water to high blood pressure and higher heart attack rates. The first study of the health effects of barium in drinking water was conducted by the University of Illinois and funded by the U.S. EPA. Health experts have stressed the preliminary nature of the findings.

Federal standards set one milligram of barium per liter of water as the maximum amount allowable in drinking water. There are, at present, 20 areas in northern Illinois that exceed that standard.

"EPA views the results with concern, but not alarm, and is planning to conduct additional research to confirm or dispute the findings," said Edward C. Lippy of the EPA's Health Effects Research Laboratory in Cincinnati.

In the meantime, the agency will hold to the current standard for barium in drinking water, he said.

"Communities exceeding the standard should proceed with plans to reduce barium exposure to avoid the possibility of occurrence of adverse health effects," Lippy said.

Clean Air Program Set for Chicago, Minneapolis

Two urban areas in Region V will participate in a national program to develop plans for industrial growth while meeting clean air requirements. Chicago, IL and Minneapolis/St. Paul, MN will use their funds to plan, carry out and evaluate locally-developed strategies. These programs will provide data on workable techniques that can be adopted by other cities.

Eight urban areas across the country will participate in the $4 million program, which is sponsored by the Interagency Coordinating Council. The Council's members include EPA, and the Departments of Commerce, Transportation, and Housing and Urban Development.

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Octane Booster Use Continued

U.S. EPA has granted a waiver to the Atlantic Richfield Company (ARCO), allowing use of the octane boosting gasoline additive, Arconol.

Arconol, consisting primarily of tertiary butyl alcohol (TBA), may be blended into unleaded gasoline at concentrations of up to seven percent. This waiver applies to the use of Arconol or TBA by other refiners as well.

Administrator Douglas Costle said that "Arconol can be used to boost the octane of gasoline, enabling increased production of high octane unleaded gasoline. It acts as a replacement for lead and MMT, which cause auto emissions to increase. This is a commendable example of refining industry innovation to meet gasoline demand in an environmentally acceptable manner."

Under the Clean Air Act of 1977, Arconol was prohibited from distribution in commerce after September 15, 1978. However, EPA suspended enforcement of this prohibition to preclude disruption of the existing marketing of Arconol while the pending waiver request was being reviewed and emmissions tests were being conducted. ARCO requested a waiver on August 11, 1978. Because EPA did not rule negatively on this request within 180 days, the waiver is granted automatically by the statute.

Short-Term Carcinogens Test Studied

Development of a short-term procedure of risk assessment for chemical carcinogens in humans is underway at Ohio State University. The U.S. EPA's Health Effects Research Lab (HERL) recently awarded a $481,000 contract to OSU.

The procedure could ultimately result in significant decreases in the cost and time necessary for assessing carcinogenic hazards. The current long-term system of exposing lab rodents to environmental agents requires at least two years. The new procedure would require only a few weeks or months.

New Truck Emission Standards

New air pollution standards and testing procedures for heavy-duty gasoline and diesel engines in buses and trucks over 8,500 pounds gross weight have been proposed by the U.S. EPA.

The new standards are proposed along with new certification procedures as part of a comprehensive strategy for controlling heavy-duty engine emissions. As required by the Clean Air Act Amendments of 1977, the new standards will mean a 90 percent reduction in hydrocarbons and carbon monoxide, compared to uncontrolled 1969 emission levels. The shift in certification testing requirements is toward a better simulation of real-life operation, and is expected to ensure that the standards are being met on the road for the vehicle's full life.

Standards have been tentatively set at 1.4 grams per brake horsepower-hour g/PHB-hr) for hydrocarbons, and 14.7 g/BHP-/hr for carbon monoxide.

Other parts of the comprehensive strategy include a 90 percent reduction in idle emissions, control of diesel crankcase emissions, tighter control of engine maintenance during testing, and factory testing of heavy-duty engines by EPA.

Herbicide Banned

In a very unusual action, EPA has declared an immediate halt to most uses of the herbicide 2,4,5-T and its closely related counterpart, silvex.

EPA Deputy Administrator Barbara Blum said the decision to suspend use of the herbicide was based on animal test results and the high level of miscarriages among women in the Alsea Basin area of Oregon, shortly after the chemical was sprayed there.

While the major use of 2,4,5-T in Region V is along power line rights-of-way, Regional Administrator John McGuire noted that Midwest consumers and homeowners may have silvex products around the house for lawn care use. McGuire warned that "existing stocks should be secured safely out of reach and in accordance with storage instructions on the products' labeling until EPA issues a final order after expedited suspension proceedings conclude."

McGuire also emphasized that distribution, sale, or use of a suspended pesticide is illegal, and could result in stiff penalties.

The emergency suspension was necessary because the spring spraying season is scheduled to begin soon, and an estimated four million people nationwide could have been exposed to the herbicides. The suspension applies to use of 2,4,5-T in forests and pastures, and along power lines and highways. It also applies to silvex, a weed killer used on lawns. Use of these herbicides is permitted on rice fields and on sparsely populated rangeland, where there is less human exposure.

Dow Chemical and ten other manufacturers and users of 2,4,5-T appealed EPA's suspension order in Federal court on March 7. That motion was dismissed by the court. Numerous chemical manufacturers have requested expedited hearings from EPA. Those hearings are expected to begin by the end of March, and could last for up to 3 months.

OFF THE PRESS

Green Bay: Portrait of a Waterway, a New publication on the history and resources of Lake Michigan's Green Bay, is now available from the University of Wisconsin Sea Grant College Program. The collection of articles traces the history of Green Bay from the time of the French explorers to the present. It also examines the Bay's dwindling marshlands and birdlife, fisheries, recreational prospects, industrial and shipping activities and dredging and pollution problems. Copies are free. Contact Sea Grant Communication Office, 1800 University Avenue, Madison, WI 53706.

CONSTRUCTION GRANTS

Applicant	Date	Award Amount
ILLINOIS		
Albany SD	2-22	$ 1,700
Bloom Township SD	2-2	3,561,600
Cedarville	2-28	11,925
Dix-Kell W&SC	2-16	1,650
Downs	2-15	675
Elk Grove	2-23	239,475
Georgetown	2-20	6,825
Kankakee	2-6	47,325
Pinckneyville	2-13	40,800
Prairie du Rocher	2-23	3,000
Rockford SD	2-12	26,250
Rosiclaire	2-12	16,350
Salem	2-8	67,500
Sauk	2-23	49,950
Winfield	2-1	42,750
INDIANA		
Columbia City	2-5	$ 42,300
Connersville	2-16	43,800
Elkhart	2-16	55,575
Greensburg	2-6	55,425
Lebanon	2-15	209,925
Monroe City	2-16	20,100
Rising Sun	2-22	27,000
MICHIGAN		
Barry County	2-28	$ 529
Battle Creek	2-7	20,700
Benton Harbor	2-26	7,500
Berrien County	2-28	14,625
Cheboygan	2-22	49,275
Chelsea	2-22	26,475
Clare	2-7	7,485
Detroit	2-21	1,596,975
DeWitt	2-28	4,725
East Bay	2-15	382,875
Ecorse Creek Drainage Dist.	2-20	210,000
Flushing	2-22	38,325
Genesee County	2-22	1,254
Hastings	2-7	20,250
Manistee	2-16	20,325
Milford	2-8	11,250
Monroe County	2-8	20,250
Muskegon County	2-22	146,775
Perrysburg	2-2	86,175
Saginaw County	2-6	1,200
MINNESOTA		
Albert Lea	2-1	$ 11,325
Aurora	2-23	221,625
Chisholm	2-7	210,450
Gilbert	2-1	191,025
Hayfield	2-21	4,725
Iron Mountain	2-21	365,250
Metro Waste Control Comm.	2-20	91,665
Metro Waste Control Comm.	2-28	406,875
Metro Waste Control Comm.	2-28	468,075
Wadena	2-28	74,250
Warroad	2-22	26,100
OHIO		
Allen County	2-26	$ 17,175
Atwood Regional Water & SD	2-8	1,950
Bowling Green	2-21	11,250
Canton	2-28	349,275
Dayton	2-28	311,025
Doylestown	2-22	117,525
Elyria	2-28	1,725
Fredericktown	2-13	92,475
Hamilton County	2-26	4,950
Oak Hill	2-16	27,375
Wapakoneta	2-28	213,000
Waterville	2-26	105,450
WISCONSIN		
Appleton	2-22	$ 12,300
Brandon	2-14	36,300
Campbellsport	2-13	28,875
Combined Locks	2-15	2,250
Delafield Hartland WPCC	2-6	24,825
Douglas County Health Care Facil.	2-28	12,225
Embarrass	2-16	20,250
Fort Atkinson	2-28	65,400
Fountain City	2-28	32,775
Harmony Grove SD	2-28	22,500
Iola	2-26	9,375
Kohler	2-21	3,225
Kekoskee	2-2	16,950
Kimberly	2-20	2,250
Madison MSD	2-8	81,933
Marion	2-12	104,625
Mauston	2-7	123,750
Milwaukee MSD	2-13	639,150
Mineral Point	2-28	91,725
Park Falls	2-8	26,625
Randolph	2-8	48,150
Rhinelander	2-13	9,402
Spring Green	2-22	46,125
Stoughton	2-9	28,950
Sturtevant	2-6	16,500
Wittenburg	2-14	29,775

NEGATIVE DECLARATIONS

Project Location	Estimated Project Cost	Potential EPA Share
Carlock, IL	Design $76,300 Construction $1,004,400	Design $57,225 Construction $669,900
Farmersville, IL	Design $23,100 Construction $285,000	Design $17,325 Construction $213,750
Jonesboro, IL	Design $42,000 Construction $456,860	Design $31,500 Construction $322,286
Palestine, IL	Design $30,400 Construction $605,269	Design $22,800
Pana, IL	Design $71,288 Construction $669,113	Design $47,062 Construction $441,722
Schneider, IN	Construction $719,700	Construction $539,775
Village of Morrow, IL	Design $267,135 Construction $4,322,877	Design $200,351 Construction $3,242,158
Village of Nilwood, IL	Design $60,600 Construction $604,500	Construction $478,575

A negative declaration is a notification to the public, prior to the grant award, that EPA believes the project's environmental impacts are not significant and that, as a result, an Environmental Impact Statement is not needed.

If you have comments or questions regarding the above projects, contact Gene F. Wojcik, Chief, EIS Preparation Section, at the Region V offices in Chicago (312)353-2157.

FEDERAL REGISTER

February 5, 1979 — Rules: Air and water pollution control: Clean Air Act and Clean Water Act, administration of grants and loans; reorganization. Air quality implementation plans; delayed compliance orders: Missouri. **Proposed Rules**: Toxic substances: Premanufacture or importation notification requirements and review procedures; availability; meetings. **Notices**: Environmental statements; availability, etc.: Agency statements; weekly receipts. Pesticide registration, cancellation, etc.: Entrada Industries, Inc. et al. **February 6, 1979 — Rules**: Grants; State and local assistance: State public water systems supervision program. **Proposed Rules**: Air quality implementation plans; delayed compliance orders: Minnesota. **Notices**: Meetings: Environmental Health Advisory Committee. Water pollution control; safe drinking water; public water systems designations: Minnesota. **February 7, 1979 — Rules**: Air pollutants, hazardous; National emission standards: Texas; authority delegation. Air pollution; new motor vehicles and engines: Model year 1979 and later NOx research objective programs conducted by automotive manufacturers. Air pollution; standards of performance for new stationary sources: Texas; authority delegation. Air quality implementation plans; approval and promulgation; various States, etc.: California (2 documents). Massachusetts. Mississippi. Air quality implementation plans; delayed compliance orders: Indiana. Nebraska. Ohio (2 documents). Pesticide programs: Packaging, special; child resistant containers for residential use toxic pesticides. **Proposed Rules**: Air pollution control; new motor vehicles and engines: Nitrogen oxides (NOx) research objective programs conducted by automotive manufacturers; 1980 and later model years. Air quality implementation plans; approval and promulgation; various States, etc.: Hawaii. Air quality implementation plans; delayed compliance orders: Ohio. Waste management, solid: Hazardous waste guidelines and standards; comment deadline clarification. **Notices**: Air pollutants, hazardous; National emission standards: Texas; authority delegation. Air pollution; ambient air monitoring reference and equivalent methods applications, etc.: Nitrogen dioxide (NO_2 (2 documents). Nitrogen oxides. Air pollution control, new motor vehicles and engines: California; waiver. Air quality implementation plans; approval and promulgation; various States, etc.: Ohio; emission limitations for sources of sulfur dioxide; inquiry. **Meetings**: FIFRA Scientific Advisory Panel; change in agenda. Pesticides, experimental use permit applications: EM Laboratories, Inc., et al. Monsanto Co. Toxic and hazardous substances control: Inventory information transfer to contractor. **February 8, 1979 — Rules**: Air quality implementation plans; preparation, adoption, and submittal: Photochemical oxidants (ozone). Air quality standards; national primary and secondary: Ozone reference methods; calibration. Photochemical oxidants. Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: 1,2-benzisothiazolin-3-one. Chlorpyrifos. CIPC; correction. Pesticides, tolerances in animal feeds: Butachlor. Chlorpyrifos. Pesticides; tolerances in food: Chlorpyrifos. Water pollution; effluent guidelines for certain point source categories: Ore mining and dressing; clarification. **Notices**: Pesticides; tolerances in animal feeds and human foods: Butachlor. **February 9, 1979 — Rules**: Air quality implementation plans; delayed compliance orders: Guam. **Proposed Rules**: Air quality implementation plans; delayed compliance orders: Indiana (2 documents). Air quality implementation plans; delayed compliance orders: North Carolina. Air quality implementation plans; preparation, adoption and submittal, etc.: State implementation plans; nonattainment areas; approval criteria; guidance materials; availability. **Notices**: Air pollution; ambient air monitoring reference and equivalent methods applications, etc.: Nitrogen oxide (NO_2). Environmental statements; availability, etc.: Las Virgenes Municipal Water District, Calif.; effluent disposal system. Solid waste disposal practices: Coal fired utilities study; availability. **February 12, 1979 — Proposed Rules**: Air quality control regions, criteria, and control techniques: Visability goal for Federal Class I areas, national; identification. Waste management, solid: Hazardous waste guidelines and standards; correction. **Notices**: Environmental statements; availability, etc.: Agency statements; review and comment. **February 13, 1979 — Rules**: Water pollution; effluent guidelines for certain point source categories: Fertilizer manufacturing; pH parameters; revocation. **Proposed Rules**: Air pollution control, new motor vehicles and engines: Heavy-duty engines; 1983 and later MYs. Air quality implementation plans; approval and promulgation: Delaware. Air quality implementation plans; delayed compliance orders: Washington. Waste management, solid: Hazardous waste guidelines and standards, etc.; correction. **Notices**: Air quality implementation plans; approval and promulgation: Georgia and South Carolina; nonattainment areas; plan availability and inquiry. Environmental statements; availability, etc.: Agency statements, weekly receipts. Pesticide registration, cancellation, etc.: Chlorobenzilate. CGA-48988 technical. Water pollution control; safe drinking water; public water systems designations: Ohio. **February 14, 1979 — Proposed Rules**: Air quality implementation plans; delayed compliance orders: Connecticut (2 documents). **Notices**: Pesticide programs: "Validated test" and "other significant evidence"; definitions for interim administrative review. Pesticide registration, cancellation, etc.: Chipco 26019 fungicide. Rhodia iprodione technical. Pesticides; emergency exemption applications: Benomyl. Permethrin. Picloram. Pesticides; experimental use permit applications: Oryzalin, etc. Pesticides; tolerances in animal feeds and human food: Glyphosate and its metabolite aminomethylphosphonic acid. **February 20, 1979 — Rules**: Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: Metolachlor. **Proposed Rules**: Air quality implementation plans; delayed compliance orders: Ohio (2 documents). 10401. **Notices**: Advisory committees review; inquiry. Air pollution; ambient air monitoring reference and equivalent methods applications, etc.: Model 200 Ozone Meter, etc. Environmental statements; availability, etc.: Agency statements, weekly receipts. **February 22, 1979 — Notices**: Meetings: Science Advisory Board. **March 5, 1979 — Rules**: Pesticides, tolerances in animal feeds: Magnesium phosphide; correction. **Notices**: Air pollution control: Clean Air Act; local or regional economic disruption and unemployment prevention in Ohio; extension of time. Environmental statements; availability, etc.: Agency statements, weekly receipts. **Meetings**: Municipal Construction Division Management Advisory Group. Pesticide registration applications; policy statement and inquiry. **March 6, 1979 — Rules**: air quality implementation plans; delayed compliance orders: Ohio. **Notices**: Air programs; fuels and fuel additives; Methyl tertiary butyl ether (MTBE); waiver.

March 7,1979 – Rules: Air quality implementation plans; approval and promulgation; various States, etc.: Alabama. Delaware. Massachusetts. Air quality implementation plans; delayed compliance orders: Loujsiana. **Proposed Rules**: Air quality implementation plans; approval and promulgation; various States, etc.: Massachusetts. Air quality implementation plans; delayed compliance orders: Indiana. Nebraska. **Notices**: Air pollution control: Sulfur oxides; monograph. **Meetings**: FIFRA Scientific Advisory Panel. Science Advisory Board. State FIFRA Issues Research and Evaluation Group. Pesticide applicator certification and interim certification; State Plans: North Dakota. Pesticides, experimental use permit applications: Dow Chemical U.S.A. et al. Pesticides; temporary tolerances: Permethrin. Water pollution control: Data collection; schedule of surveys. Water quality management public participation training grants, availability of funds.

March 9, 1979 — Rules: Air quality implementation plans; delayed compliance orders: Maryland, West Virginia (4 documents). Pesticide programs: Packaging, special; child resistant containers for residential use toxic pesticides; republication. **Proposed Rules**: Air programs; regional consistency. **March 12, 1979 Rules**: Air pollution; standards of performance for new stationary sources: Petroleum refineries; clarification of "fuel gas" and "fuel gas combustion device". Air quality implementation plans; approval and promulgation; various States, etc.: Louisiana, New Jersey; correction, Pennsylvania. Air quality implementation plans; delayed compliance orders: California, Indiana (2 documents), Maryland, Ohio, Virginia (2 documents). West Virginia (3 documents). **Pesticide** chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: 6-Benzyladenine. Pesticides; tolerances in animal feeds and human food: Glyphosate. **Proposed Rules**: Air quality implementation plans; approval and promulgation; various States, etc.: Louisiana. Air quality implementation plans; delayed compliance orders: Maryland. Pesticide tolerances in or on raw agricultural commodities; tolerances, exemptions, etc.: *O,O*-diethyl *O*-(2-isopropyl-6-methyl-4pyrimidinyl) phophorothioate. Waste management, solid: Hazardous waste guidelines and standards; extraction procedure; extension of time **Notices**: Air quality implementation plans; approval and promulgation; various states, etc.: New Mexico. Environmental statements; availability, etc.: Agency statements, weekly receipts. Mining waste study; draft report; availability and inquiry. Pesticides, experimental use permit applications: Fairfield American Corp. et al Mountain High Corp. et al. Pesticides; temporary tolerances; Glyphosate. Pesticides; tolerances, registration, petitions, etc.: Restricted use products; amendment. Toxic and hazardous substances control: PCB contaminated soil and debris; disposal; citizens' petition; inquiry.

E I S COMMENTS

Sponsoring Agency Project Number Type of EIS	Project Location	Description	Summary of Comments	Rating, Comment Date
Interstate Commerce Commission 79-004-1700		St. Louis/San Francisco-Burlington Northern Railroad merger	No objections.	LO-1 2-2-79
Federal Highway Admin. 78-069-425 (Draft)	Greene Co. and Fayette Co., OH	Highway construction, U.S. Route 35, Xenia to Washington Courthouse	No major objections. Further discussion of water quality impacts and noise mitigation measures requested.	LO-2 2-6-79
Dept. of Energy 79-008-2300 (Draft)		Implementation of Fuel Use Act	Concerns expressed regarding potential adverse effects on public health.	2-7-79
Federal Highway Admin. 78-014-423 (Final)	Westland and Garden City, MI	Highway reconstruction, M-153	Reductions in vehicle miles traveled and compatability with regional planning agency traffic projections not addressed.	2-9-79 (Draft LO-2, 6-12-78)
Federal Aviation Admin. 78-073-411 (Draft)	Bloomington, IL	Bloomington/Normal Airport expansion	More information requested on noise impacts and loss of prime farmland.	ER-2 2-14-79
Corps of Engineers	Moline, IL	Flood protection project along the Mississippi River	Previous comments adequately addressed.	2-15-79
Federal Highway Admin. 78-084-423 (Final)	Mecosta, Co., MI	Reconstruction of M-20 bridge over Muskegon River	No major objections. Suggest measures to limit construction noise.	2-21-79
Federal Highway Admin. 78-063-422 (Draft)	Richmond, IN	Industries Road extension	No major objections. Further information on noise limitation measures requested.	LO-2 2-21-79
Federal Highway Admin. 77-024-422 (Final)	New Albany, IN	Interchange construction, I-265 and State St.	Previous comments adequately addressed.	2-20-79 (Draft ER-2, 5-10-77)
Housing and Urban Development 78-083-1025 (Draft)	Montgomery Co., OH	Housing development, Wayne Township	Major concerns expressed regarding lack of adequate wastewater treatment, solid waste disposal, lack of 208 coordination, potential for flooding, possible air pollution and lack of consideration of secondary effects.	EU-2 2-27-79
Housing and Urban Development 78-080-1021 (Draft)	Aurora, IL	Housing development, Fox Valley Villages	Major concerns regarding wastewater treatment, noise impacts and long-range limited water supply.	EU-2 2-27-79
Soil Conservation Service 78-048-931 (Final)	Cook Co. and Will Co., IL	Little Calumet River watershed plan	Water quality concerns adequately addressed.	3-2-79 (Draft ER-2, 8-11-78)
Housing and Urban Development 78-056-1024 (Final)	Washington, Co., MN	Housing development, Woodlane Hills	Need assurances that drinking water standards will be met.	3-6-79 (Draft ER-2, 10-12-78)

*** Alphanumeric Code:**

LO -- Lack of objections or minor changes suggested

ER -- Environmental reservations on certain aspects of project; suggest further study of modifications or alternatives

EU -- Proposed action environmentally unsatisfactory, potential safeguards are insufficient

1 -- Adequately sets forth impact and alternatives to proposed action

2 -- Insufficient information; EPA cannot fully assess project but can make preliminary determination of impact

3 -- Draft inadequately assesses project and/or alternatives, EPA requests substantial revisions in draft

All Region V EIS Comments are prepared by the Office of Federal Activities, Environmental Impact Review Staff. For more information or to obtain copies of EIS comments, contact Barb Taylor at (312) 353-2307, U.S. EPA, Region V, 230 S. Dearborn St., Chicago, IL 60604.

Library Fair

EPA's Region V Library, in the Kluczynski Building, 230 S. Dearborn, Chicago, will host a fair during the week of April 23-27, for environmentalists throughout the Midwest. The purpose of the event is to find new owners for a collection of excess or duplicate materials accumulated by the Region V Library in recent months.

The materials being offered are mostly reports and journals. The largest category is EPA-generated report literature. Many of these materials are complete runs of titles which represent duplicate copies or items replaced with microfilm.

There are some State and local government environmental reports, a fair-sized collection of other Federal agency publications on environmental subjects, and a limited quantity of books.

For further information, call Ms. Lou Tilley, 353-2072.

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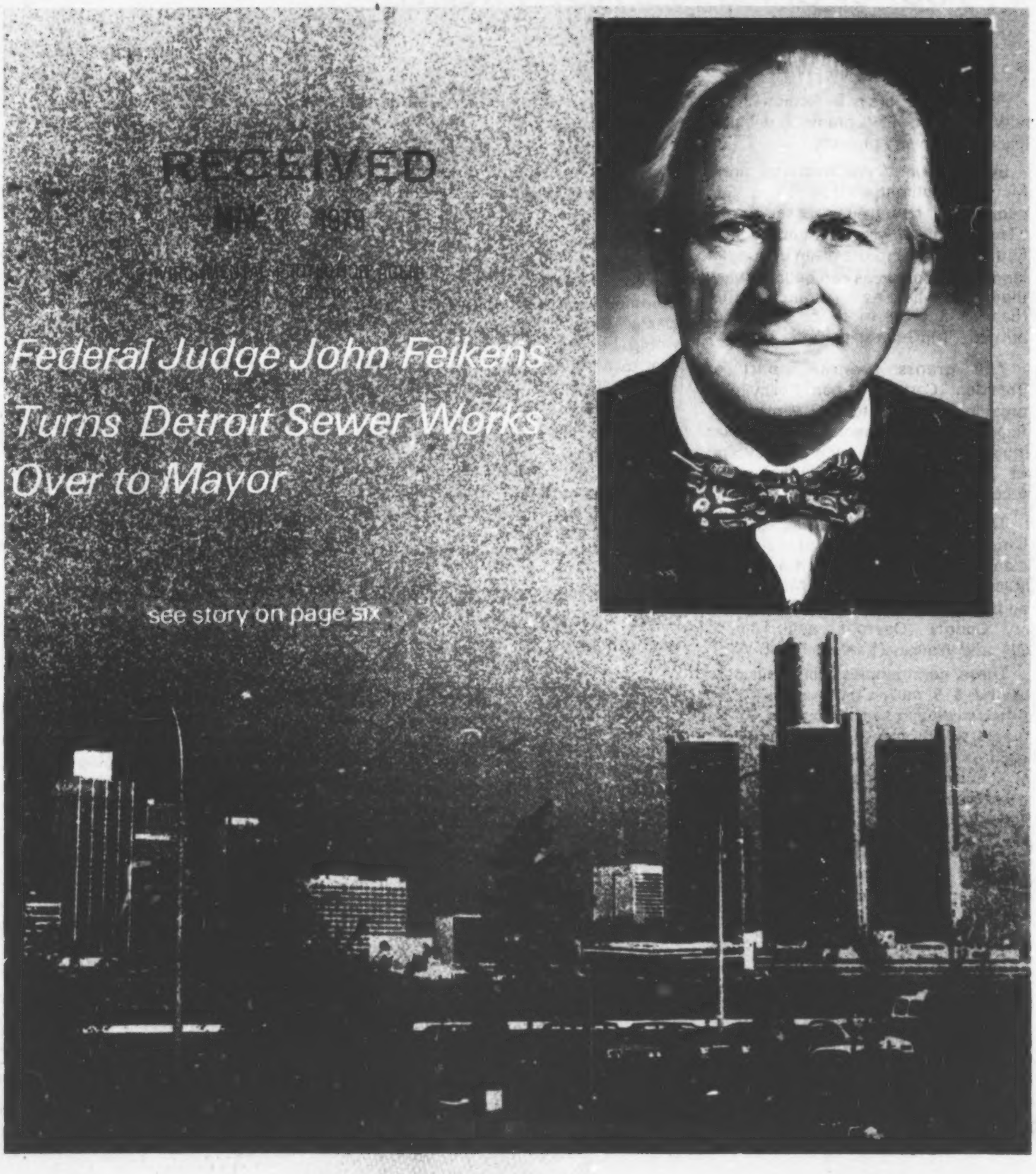

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ENVIRONMENTAL PROTECTION BOARD

Federal Judge John Feikens Turns Detroit Sewer Works Over to Mayor

see story on page six

Garbage Put to Use

A Tour of Chicago's RDF Facility

By Arthur Baden

Eleven urban areas in Region V are now eligible for EPA grants to develop resource recovery projects.

EPA Region V Administrator John McGuire estimates that 10 million people will benefit by these grants. "These monies will help communities find alternatives to the often unpopular landfills. Urban areas can begin to view their solid waste as a resource, rather than as a problem to be buried or burned," McGuire said.

The grants program, part of President Carter's Urban Policy, will provide funds for feasibility planning, financial arrangements, and market studies for projects such as recycling of paper, glass, and aluminum, or recovery of energy from solid waste.

The eleven cities selected are: Chicago and Rockford, IL; Indianapolis, IN; Detroit, Flint and West Michigan, MI; St. Paul, MN; Cuyahoga County (Cleveland), Montgomery County (Dayton), and Toledo, OH; and Wausau/Stevens Point, WI.

These communities will participate in the $15 million program with 57 other areas across the country. These grants will provide funds for activities such as feasibility planning, arranging of financing, and market studies, and determining where there is a fuel and/or materials market for processed waste.

Chicago has a facility that is a prototype for the type of project the Urban Grants program is intended to help.

On August 9, 1973, the City of Chicago announced plans to sell processed residential solid waste to the Commonwealth Edison Company. This waste, Refuse Derived Fuel (RDF), would be used in combination with coal to be burned by Commonwealth Edison furnaces to generate electricity. John Ellis is the plant manager at the Southwest Supplementary Fuel Processing Facility, which turns residential solid waste into RDF. The facility is owned and operated by the City of Chicago Department of Streets and Sanitation.

> *The idea that household refuse could be transformed into fuel was developed in 1969.*

The idea that household refuse could be transformed into supplementary fuel for power generators was first developed in 1969. A small demonstration project in St. Louis proved that the idea was feasible on a small scale, but did not provide the data base for a large project such as Southwest.

So Ellis has been working with engineers from the Chicago Departments of Public Works, Streets and Sanitation, and Environmental Control, and Commonwealth Edison, to obtain answers to questions such as: What is the optimum size of the RDF pellets? What is the best mixture of RDF and coal for use in the incinerator? How do you control air and water pollution at the facility?

Since the Chicago facility accepted its first load of garbage in March of 1977, nearly all the orginal machinery has had to be replaced or redesigned. Ellis said that one of the shredders only lasted 10 hours before it conked out. No one could know for sure how much stress these machines would be able to take. When one machine would be changed,that would affect the system all the way down the line. It has taken a while for the plant to get up to speed, but Ellis is confident that the shakedown period is nearly over.

Monday through Friday, garbage trucks from all over Chicago stream into the Southwest plant and dump their valuable loads on the tipping floor of the plant. Bulldozers push this refuse into a pit where it is carried away on

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Nancy McKinney . . . . Briefs

A recycling plant worker dumps a load of noncombustibles that have been filtered out of the refuse.

Monday through Friday, garbage trucks from all over Chicago stream into the Southwest plant and dump their valuable loads on the tipping floor of the plant. Bulldozers push this refuse into a pit where it is carried away on conveyor belts. Remote control cameras keep a close watch on the refuse all the way down the line, scanning for explosives or pressurized canisters which could explode and damage the shredders or cause injury to workers.

The refuse pours into huge coarse shredders, which process 80 tons of refuse per hour. The refuse, which now consists of particles no bigger than 8 inches, is dropped into an air classifier. A power blower produces an airstream which carries the light-weight materials (most of which are combustible) up through the top, while the heavier, generally non-combustible materials, fall down and out the bottom of the classifier. Ferrous materials are separated out and sold to a scrap dealer. The remainder of the heavy material is sent to a municipal landfill. The possibility of recycling aluminum, which has a very high resale price, is also being considered.

The lightweight combustibles go through the fine shredders next, which break the particles down to about one and a half inches. The refuse is now in a condition where it can be used as fuel. Pneumatic tubes carry this fuel overland to Commonwealth Edison's Crawford Plant, a few blocks away. The RDF is stored in bins until it is carried by other tubes to the blast furnaces where it is mixed with coal and burned to produce electricity.

Projects like this are in the forefront of energy conservation technology

Commonwealth Edison and the City of Chicago are experimenting with the coal mixture to see if the percentage of RDF can be increased without reducing efficiency or damaging the furnaces. At present, the combustion ratio is one part RDF to nine parts coal. The engineers at the plant believe that the percentage of RDF may be doubled without any adverse effects.

Projects like the Southwest facility are in the forefront of energy conservation technology. RDF provides a cheap source of fuel, as well as an environmentally sound method of waste disposal which saves energy that otherwise would be used in the processing of raw materials. This one facility, therefore, provides solutions to various environmental and conservation problems.

Regional Administrator McGuire feels that facilities like this one in Chicago, and those being studied through the Urban Grants, are the way of the future.

"Many of people say that you can't have a sound economy and a clean environment. But plants like this point out that this is not the case. Besides reducing the need for oil imports and helping ease the solid waste disposal problem, these facilities create new jobs in the resource recovery industry." ♻

The Diesel Dream now . . . or never?

By W. W. Reid

When Rudolf Diesel invented his particular version of the internal combustion engine in 1892, the world did not actually beat a path to his door.

The "diesel," as it came to be known, had its drawbacks, then as now; it was noisier, more difficult to start when cold, smellier, and dirtier than its gasoline-powered predecessor.

There were other characteristics in the diesel's favor, however. It was simpler in design, construction, and operation, it was easier to maintain, and it was more durable.

One more advantage that the diesel had over the gas engine has only taken on major significance since the 1974 oil embargo: diesels get from 25 to 30 percent better mileage.

This superior mileage has tipped the scale in favor of increased diesel engine manufacturing in recent years. More and more auto manufacturers have been developing and marketing diesel-powered passenger cars. Mercedes-Benz, modestly successful in the past with its diesel version, has seen sales climb in the last two years. Volkswagen exported its diesel Rabbit to the U.S. and saw sales take off.

As American manufacturers prepared to commit themselves to the diesel, 1978 sales were up 300 percent over 1977 and 1979 was shaping up as more of the same. The diesel age appeared to be at hand.

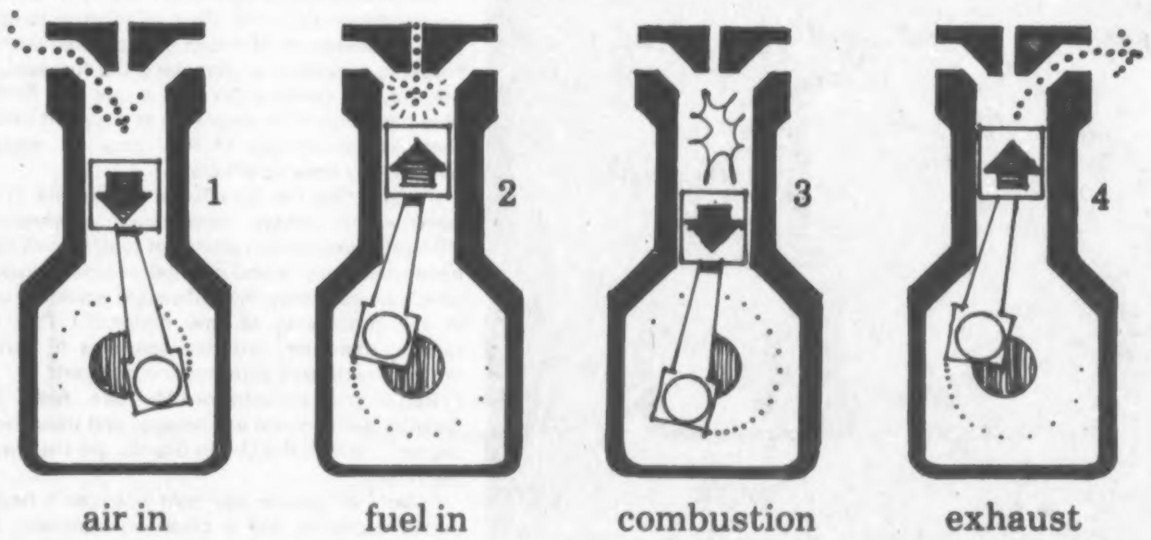
EPA, in anticipation of just such a major manufacturing development, had been studying the environmental implications of any significant increase in diesel-powered vehicles on America's highways.

The initial EPA program to evaluate the potential impact of increased diesel exhaust on public health began in 1971. In the last two years, studies have been intensified and a complete report on the exact nature and extent of the relationship between diesel exhaust and the respiratory system is in the works.

Results of tests conducted at EPA's Office of Research and Development (ORD) Laboratory in Research Triangle Park, North Carolina, and the ORD Emissions Testing Laboratory in Ann Arbor, Michigan have led EPA officials to the following preliminary conclusions:

- Diesels emit from 30 to 100 times more particulates than gasoline-powered vehicles equipped with catalytic convertors. This finding was no surprise; diesels have always been notorious for their smokey exhaust.
- The particulates in diesel exhaust are usually smaller than one micron; i.e., the smoke from diesel exhausts is comprised of fine particles — they can pass through the lung's defense mechanisms and penetrate deep into lung tissue. The same is true of particules from gas-powered engines, but those are sulfer-based particles. Diesel emissions are made of of carbon compounds. Experiments are continuing to determine just how long these carbon

WHAT IS THE DIESEL DIFFERENCE?



In a diesel engine, a heavy fuel oil is ignited when injected into very hot, highly compressed air.

particulates remain in the lung and what sort of damage is done.

- In 1977, ORD conducted chemical experiments which indicated that diesel particulates will consistently cause mutations in the genes of colonies of bacteria. Final conclusions concerning the mutagenicity or carcinogenicity of diesel exhaust have not been made, pending completion of ongoing test programs.

Many of the tests conducted so far have centered around the Ames microbal mutagenicity bioassay test system which measures effects outside of a living body, or *in vitro* (Latin for "in glass," i.e., a test tube or petri dish), so the implication of test results as far as human health is concerned are inconclusive.

But now researchers in EPA's Health Effects Research Laboratory in Cincinnati are examining the effects of diesel exhaust on animals in whole body studies. These experiments, when complete, will give a better clue to the relationship between the diesel and human health, with particular emphasis on lung cancer risks.

Both the Federal government and the auto manufacturing industry will be closely scrutinizing the results of the experiments. Whether diesel production is endorsed or restricted as a result of the study, the findings will have wide-ranging economic and political implications.

Bill Pepelko, Chief of the Functional Pathology Branch of HERL's Laboratory Sciences Division, outlined the sorts of tests being performed. "We are exposing approximately 2800 laboratory animals to a representative level of diesel exhaust for varying lengths of time and observing the effects," he said. "One study will determine the impact of a lifetime of exposure to diesel exhaust on hamsters." Since the particular breed of hamster used in the study lives about 20 months, results won't be available until the fall of 1980.

"In a shorter term experiment," said Pepelko, "a certain strain of cancer-prone mice are being exposed to diesel exhausts for brief periods and checked for increases in tumor incidence. We should have some results there in the next six months or so."

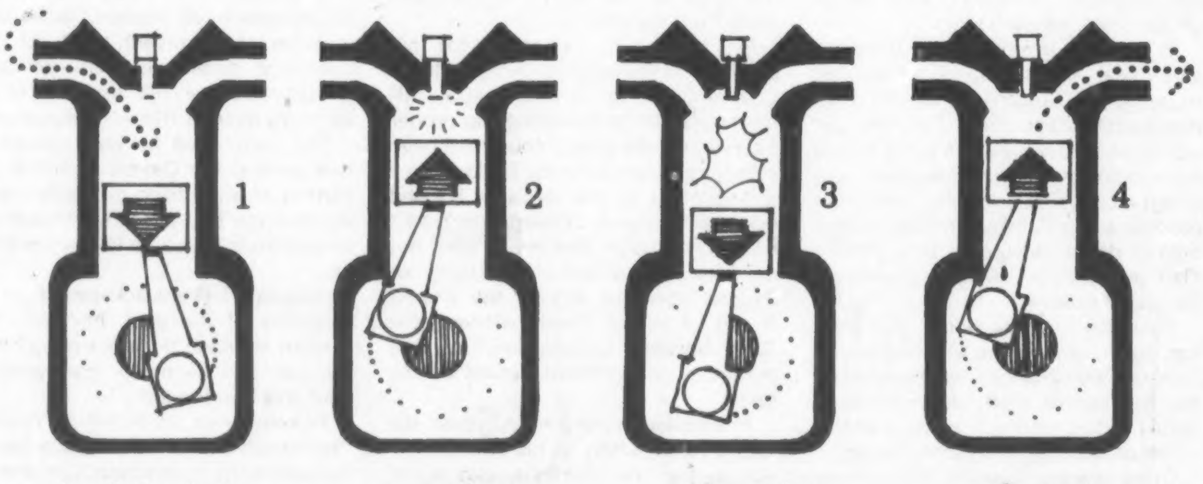
Other tests are examining the possible relationship between diesel smoke and liver ailments. A healthy liver will detoxify dangerous chemicals that enter the body. But certain chemicals affect the liver in such a way that, instead of detoxifying the chemicals, the liver turns them into carcinogens. Tests are being conducted to see if any elements of diesel exhaust affect the liver in this way.

A special 90-day exposure test will check for chromosome damage in hamsters exposed to diesel exhaust. Before the cell division that makes physical growth possible occurs, chromosomes in the cell nucleus replicate and align themselves appropriately.Certain chemicals can cause the chromosomes to break during replication, which can lead to cell mutation and physical deformity. The 90-day test will attempt to find if diesel exhaust can contribute to this problem.

The physical consequences of diesel pollution naturally receive most of the attention in these experiments. But there have been indications that diesel pollution can affect emotional and psychological activity and this possibility will be the subject of a series of tests, Pepelko said."There is some evidence of a delay in mental development in test animals exposed to diesel exhausts. Also," he continued, "rats that normally spend a great deal of time running in their wire wheels show a marked decrease in this activity in the presence of diesel exhaust."

Whether this proves that diesel pollution reduces one's capacity for physical activity, or that rats are simply too smart to go jogging in the smog, the researchers at HERL are committed to get to the answers and a great many people are watching carefully for the results.

It remains to be seen whether Rudolf Diesel's 88-year-old invention is the wave of the future.....or a relic of the past.



In a conventional four-cycle engine, a compressed mix of gas and air is ignited by a spark plug.

Judge Turns Detroit Sewer Works Over to Mayor

Young Has One Year to Clean Up Plant

By W. W. Reid

For decades, the Detroit Sewage Treatment Plant has been struggling — and failing — to adequately process the Detroit area's wastewater. U.S. EPA has called the plant the worst polluter of Lake Erie, and one of the worst water polluters in the nation. In May of 1977, the plant was cited for repeated violations of its operating permit.

Since September of 1978, the plant has been operating in violation of legal pollution limits. Federal and State authorities have charged that the city's Water and Sewerage Department has allowed the plant to discharge some contaminants at levels four times greater than the law allows.

In 1977, approximately $400 million in Federal aid was reserved for the State of Michigan, with the understanding that much of the aid would be used to upgrade facilities and expand the plant. But new equipment designed to improve the treatment process was poorly maintained and has broken down, according to a motion filed in October 1978 by State and Federal attorneys.

To make matters worse, the plant has been seriously understaffed. As many as 100 vacancies have existed on the operational staff, many of them highly skilled technical posts essential to the proper operation of the facility.

State officials charged that it is impossible for the city to hire the necessary technicians because of a residency requirement restricting recruiting for the jobs to Detroit city residents. The requirement was subsequently dropped.

But government officials have continued to argue that the plant should be placed under the management of outside agencies in receivership. They maintained that the repeated failure of the city to run the facility properly proved that the operation should be managed by someone other than the city.

Federal Judge John Feikens has resisted those arguments. He appointed an independent monitor to fully evaluate and report on the plant's problems. That report, presented to the court in December, 1978, was highly critical of the facility's staff and management. Pressure mounted on the court to take control of the plant away from the city.

On March 21, Feikens made his decision: he appointed Detroit Mayor Coleman Young as his special administrator for establishing the proper operation of the plant. Young will have complete control over the facility.

According to the decision handed down by Feikens, Young will report only to the judge. The mayor need not account for his actions to State or Federal agencies, nor to the Detroit Board of Water Commissioners, the Civil Service Commission, or the suburban governments served by the plant.

In addition, Young may bypass the City Council when, in his opinion, action by the Council might delay or impede plant operations.

However, Young said he plans to fully inform Council members of all his decisions and would not ignore their advice.

The Mayor's appointment is for one year. The court can relieve him of his sewage management duties, or Young can ask to be relieved, at any time.

Feikens has given Young specific authority to manage the finances of the plant, including bill payment and collection, contract negotiations, and borrowing of funds. The mayor will also have jurisdicition over hiring and firing of plant personnel.

Judge Feikens was emphatic in defending his decision not to turn the Detroit plant over to State or Federal agents.

"Whenever a Federal court is involved in the affairs of local government and a remedy is sought which may interfere with traditional notions of separation of powers, great care must be taken to reach a balance that does not summarily deny to local government the full exercise of its authority over its affairs," Feikens said.

The judge said he was concerned that putting the Detroit facility in the control of an outside authority would prevent the city from participating in an operation crucial to its own existence.

Although Feikens acknowledged the problems of the past, he said, "the present situation does not require that the city and its mayor be separated from this vital function."

Feikens went on to praise Young's "herculean effort" to revitalize Detroit through downtown restoration and expansion of city services and cultural opportunites. He cited the mayor for his "remarkable competence in turning this city around," and, referring to the sewer situation, said, "I am firmly of the opinion that he can do likewise here."

"I could have told the council to live up to the consent decree or pay $10,000 a day in fines. But that's not the way to solve the problem."

An interview with Detroit Judge John Feikens

Snail darters, Ohio sulfur oxides, discharges of taconite in Lake Superior, and municipal wastes in Milwaukee are just a few of the complex enviromental issues that the Federal judiciary has been asked to deal with. In the following interview, Judge John Feikens, soon to be appointed chief Federal District Judge for Detroit, discusses the judiciary's participation in environmental concerns with **EM's** Frank Corrado. The interview was conducted on April 19 in the judge's chambers in Detroit.

Q. Are Federal judges being asked to make political determinations? Are they becoming activists in environmental issues?

A. We have to realize, as deTocqueville pointed out, that every political problem becomes a judicial one. Inevitably, things will get more and more complex and the legislative process, which is a political process, will have to give way to the judicial process.

Q. Why?

A. You say to a Federal judge, "Congress has given you jurisdiction, here is a problem (like the one we've had with the Detroit sewage treatment system) that has an effect on the nation's entire wastewater program. Without the encumberance of the political process, we want you to balance the issues here. In this case, it was the judge's role, my role, to force the recognition that you have to give decision-making power to one person, the mayor. This type of judicial involvement has been seen in school district decision, Federal prisons, and environmental cases. Behind all this, you have to realize that the legislature can't solve everything.

Q. How did this evolve?

A. You have to go back to **Marbury vs. Madison,** where Justice Marshall carved out a tremendous source of power for the judiciary. He ruled that judges could rule on whether political enactments are constitutional. The judiciary then was expanded to "fill in the gaps" left in the political process by the Constitution. An example of this is the snail darter case, where you had the Congress authorizing a dam to be built on the river and also enacting legislation to protect an endangered species. Until Congress decides who wins, the Courts must act. The

Aeration tanks at a sewage treatment plant.

82

Judge Feikens continued . . .

Constitution really didn't provide for other than a Supreme Court. The growth of the country mandated something like a Federal judge to call the shots.

Q. How has this judicial process worked in the Detroit sewage treatment case?

A. Let's look at the conflicts. We have a city that made an initial investment and took title to a plant, which as the area grew up over 75 years, had more and more suburbs tapping into it at a low cost. Then you had a growing desire on the part of people to clean up. People realized that you just couldn't dump the sewage. The Federal coontrols followed. Now the question was: how do we pay for this system, which now serves over four million people? Only the Feds could fund these massive changes and so a huge grant program was devised. Coupled with this was a Congressional mandate that standards be met. But now you had new political strength in the suburbs. And the former leadership group in the city had moved to the suburbs, with a new mayor and council in place who were black. It was a learning process for them. Detroit, like other cities, is at the point of either decay or renaissance (There are a lot of people who feel this city has turned around and that is *because* we have a leadership group that is working together). The mayor has established a good working relationship with the business community.

"I remember Kennedy saying that, after the Bay of Pigs, he'd never trust another expert. . .experts shouldn't be making decisions."

In August of 1977, EPA started its suit against Detroit, saying in essence, "you're years behind in cleaning up, and we're going to ask for some heavy sanctions." Meanwhile, the suburbs said they wanted to have a majority on the water board. When the case came before me, the first thing I had to do was issue an order putting a lasso around $400 million in Federal funds that might have been lost. The minute I did that, I was in deep trouble with the out-of-State communities who had a claim on some of that money. Good cooperation between the State and EPA solved this problem. But for Detroit to finance its share of the cost of upgrading the plants, rates had to go up dramatically. But it became evident that the real problem was the gross inability of the present plant and management to carry out the terms of the 1977 consent decree between EPA and the city. Because of this problem, EPA filed a show cause motion in August 1978. I then appointed a monitor to help me identify problems in the process.

Q. Did you rely on his technical findings in your decision?

A. I believe that in a complex situation like this you've got to have generalists. The value of a judge is that he is a generalist with an ability to balance. I remember John Kennedy saying that, after the Bay of Pigs, he'd never trust an expert again. I think the Three Mile Island Case was an excellent example of this reliance on experts. Experts are valuable, but they should not be making the decisions.

"I appointed Mayor Young to put the problems into focus. . .he already had more power than any outside expert I could appoint."

Q. And your decision was . . .

A. To appoint Mayor Young himself as Administrator of the Detroit system. By doing this, we were able to put into focus the problems. It was the city's plant, and you had to respect the fact that the chief executive already possessed more powers than any outside expert I could appoint.

For example, I found it took 40 weeks to procure an ordinary set of roller bearings that I could pick up at a hardware store on a Saturday morning. There are some close deadlines coming. There will be plantwide test later this summer. I want to see the results of the test before I change any deadlines.

Q. Going back to whole question of the judiciary and the legislative process and its problems . . .

A. I was active in politics here in Michigan after I left law school at the U of M. I ran the Eisenhower committee here in the State in 1951 and I was active for about four years, so I am very much aware of the political process and how it works. I am aware of the kinds of problems we have in the political arena. In this Detroit case I could have been the kind of judge who waited for lawyers to come to him and come in with a case. And I could have told the council, live up to the consent decree or pay $10 thousand a day in fines. But that's not the way to solve the problem.

Q. So Federal judges do possess strong powers?

A. To call a spade a damn shovel, I don't like the concentration fo that much power with a small group of Federal judges. There is a need for more partnership between the branches of government. I think the system can work, but in oversimplistic terms, political leaders today are not tough enough. Where the average political leader loses out is in trying to satisfy competing interest groups. He puts up the dam, then passes an endangered species act. He's got to decide the social value between the two. There is indecision on the part of Congress on energy. They don't want to make the tough decisions. But people crave decisions. People are a lot tougher than their leaders think they are. The stop gap for now is the judiciary. It is really better to have the political process make the decisions than to let the judges handle it.

You know, I grew up in an age of heroes. We had FDR, Babe Ruth, Lindbergh. We don't have heroes anymore. This is the era of the common man, the narcissicism of "do your own thing." And the result is a tower of babel where we're not speaking the same language anymore.

Getting Everybody Into the Act

New Public Participation Guidelines Announced

By W.W. Reid

U.S. EPA has published the final version of the regulations covering public participation in programs under the Resource Conservation and Recovery Act, The Safe Drinking Water Act and The Clean Water Act.

The final regulations are the end result of a process begun in March, 1978. At that time, EPA published a set of concept papers outlining the basic points of the public participation effort. Based on public response to the concept papers, proposed regulations were published in the August, 1978 Federal Register.

In response to public comment on the proposed regulations, EPA decided to move the final regulations in the direction of greater flexibility, more local authority, and fewer specific requirements.

"The final regulations should lead to greater public confidence in government," said Lee Daneker, Chairperson of the Public Participation Regulation Committee of the Office of Water and Waste Management at EPA headquarters in Washington. "In addition, the new regs should encourage economy in government operations and better cooperation between units of government and members of the public."

"EPA has received a great deal of strong comments from members of the public supporting differing ideas about what form these regulations should finally take," said Daneker. "I feel we have done a good job of taking these sometimes conflicting comments into account in shaping the final regulations."

This final version of the regulations eliminates many requirements that were criticized during the public comment period as too restrictive. Among other things, the final version:

- eliminates the requirement for an annual report from the State on public participation;

- allows for selective use of portions of the public participation mailing list, rather than a complete mailing of all materials;
- changes the requirement that copying facilities be available to the public at information depositories to a recommendation;
- changes the requirement that all materials relating to an area affected by any decision be placed in an appropriate information repository to a requirement to do this for "significant" decisions only;
- eliminates the requirement that notice of public meeting be mailed as soon as the meeting is scheduled;
- eliminates the requirement to publish the public hearing agenda;

- grants the Regional Administrator the authority to waive public hearing notice requirements in emergency situations;
- allows substitution of tape recordings for transcripts of public meetings;
- eliminates the financial disclosure requirement for members of public participation advisory groups;
- relaxes the criteria for membership in the advisory groups;
- allows more flexibility in revising the agency's workplan;
- increases the role of State and local agencies in EPA's training of public participation advisory groups.

"The main purpose of the public participation regulations," said Daneker, "is not so much to set down requirements, as to provide opportunities. The final regulations are flexible and can accommodate the wide variety of situations that lead to the development of effective laws and regulations."

New Underground Injection Regs Ensure Safety

By W.W. Reid

Around the Region and the nation, wells thousands of feet deep are being used as underground waste disposal sites.

Such deep wells can accomodate liquid industrial wastes that cannot be safely and economically handled in other ways.

A major concern regarding these wells centers around the fact that anything injected into the ground can have a serious impact on drinking water sources in that area.

One of EPA's most important water program efforts is dedicated to ensuring the safety of that water.

In Region V's Water Division, that responsibility falls to the Ground Water Protection Section. Tony Leffin is a hydrogeologist, James Mayka is a sanitary engineer, Karen Theisen is a geologist, and Rich Bartelt is the Section Chief.

"...the safest technique available for hazardous waste disposal is underground injection."

"The underground injection control (UIC) program is EPA's first major regulatory effort directed soley at ground water protection. Although underground injection is not the single most significant source of ground water pollution, the extremely hazardous nature of some of the industrial wastes injected and the potential threat to health make regulation worthwhile," said Bartelt.

"Accordingly," he continued, "UIC is a major EPA program effort, with national regulations to be published in the next few weeks."

The regulations, Bartelt explained, will cover several categories of injection operations and will set forth the minimum requirements any contractor must meet in establishing a deep-well disposal site.

The criteria for a properly designed and constructed site will include several strict requirements.

- Appropriate geological and hydrological data on the proposed site of the well must be provided with the permit application. The underground formation must be demonstrated by the contractor to be sufficiently isolated from any actual or potential drinking water source. The geologic structure must be capable of accepting and holding the particular liquid to be disposed of. For example, some rock formations are compatible with an acid substance, but not a base substance, and so on.
- Geologic material above the receiving area must be such that it will prevent the upward migration of the waste.
- The contractor must demonstrate the technical knowledge and have the resources necessary to ensure the project's success.
- The well must be shown to be free of defects. A complete seal at all levels of the tubing and at the bottom of the well is required.
- Proper operation, maintenance, and abandonment procedures must be provided for.

"These wells are to be designed and constructed as permanent disposal sites," Bartelt said. "Once an approved well has been properly completed, the material that is injected is there for good."

"Nonetheless," he continued, "it is conceivable that the materials might be pumped out of the well in 20 or 50 or 100 years and disposed of by some other method that hasn't been discovered yet. It just has to be emphasized that these are intended to be permanent, not temporary, disposal sites."

Because of this possibility of retrieving wastes when a better disposal method becomes available, it could be argued that deep wells are a better means of disposing of hazardous wastes than the secure landfill technique, since the latter does not allow easy retrieval of the disposed materials.

"In my opinion," Bartelt said, "in certain instances, the safest technique available for hazardous waste disposal is underground injection."

The revised regs will stress security of final construction."

This is all not to say that there aren't some problems with the underground injection technique.

There have been instances of poorly engineered wells, where some of the disposed fliuds migrated upward and contaminated drinking water.

"But these cases are far and away the exception and not the rule," Bartelt said.

He added that these few instances have, for the most part, been associated with oil and gas production operations; such wells do not typically pose the same toxic hazards as industrial injection wells.

Nonetheless, the public is often leery of something as mysterious as deep-well injection.

"The public perception is that it's impossible for anyone to really know what's going on down there," Bartelt said. "Their concern is 'how do we know the stuff is going to stay put?' As a professional engineer, I can say that there are reliable techniques for determing an appropriate site and for ensuring the proper design, construction and operation of an injection well."

"We can be sure enough of these techniques," he continued, "that the

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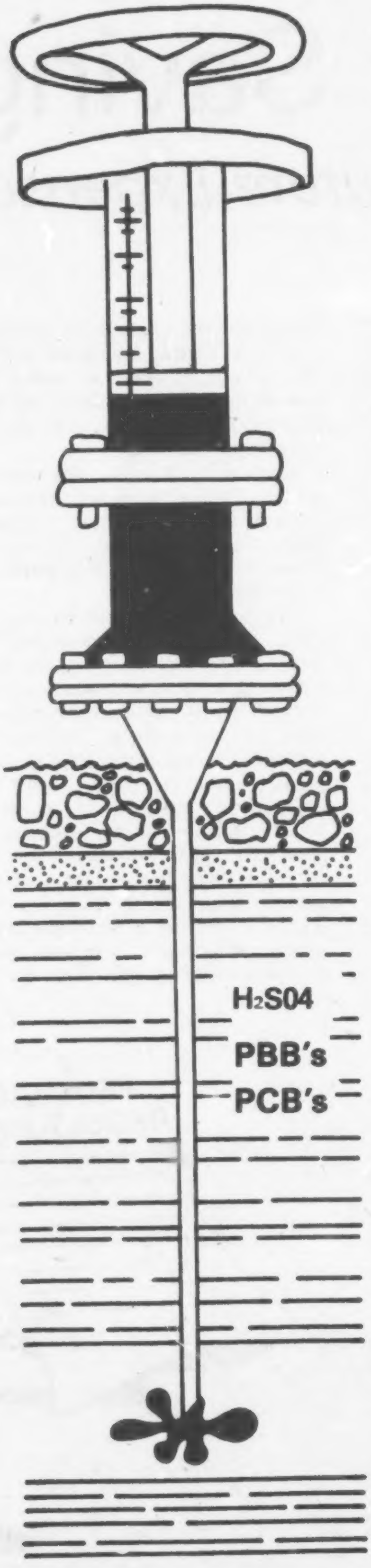


Bob Nagel/EPA

only thing that we have to fear is an earthquake or some other equally unusual and unpredictable event, and these uncontrollable factors can threaten any kind of construction — bridges, office buildings, coal mines or what have you. It is difficult to say that any project is completely safe. We can, however, say that the failure of an injection well that meets these proposed criteria is highly unlikely."

Another problem is that deep wells are expensive. A 1000-foot well can cost $1 million.

"These projects are carried out by the leading engineering firms in the drilling business," Bartelt said. "A great deal of scientific investigation and sophisticated engineering is necessary to ensure that the implacement of fluids is a permanently secure proposition. This is not a case of just anyone going out and digging a hole for someone else to pour wastes into.

Since deep-well development is such a complex undertaking, involving the protection of as important a commodity as drinking water, extra care has gone into the preparation of the regulations which will soon be proposed as part of the Safe Drinking Water Act.

UIC regulations were first proposed in August of 1976. They were very specific — too specific, as it turned out.

In an attempt to provide a definitive instruction for every stage of design and construction of deep wells, the regs initially proposed were too restrictive, Bartelt pointed out. "They did not allow for the inevitable variations that would occur in actual field operations involving the widely varying geologies and various types of wastes," he said.

After a year's review by State agencies and underground injection industry representatives, EPA decided to revise the regulations. The new proposed regulations will be published soon in the Federal Register. They will be more flexible than the former version, and will give more discretion to the States in making decisions about local situations.

The revised regs will stress secuity of the final construction, without trying to legislate all the details relevant to any particular project; that will be left up to the States.

In essence, the regulations will take the form of a performance specification requiring the protection of underground sources of drinking water.

The proposed regulations will require States with major underground injection activity to ensure that State UIC programs are at least as stringent as the Federal regs themselves. Only four States in Region V come under that category at present: Ohio, Illinois, Michigan and Indiana. Nationwide, 22 States will be required to demonstrate compatibility between State and Federal plans. Eventually, by 1981, as the proposed regs now stand, all 50 States will have to have a Federally acceptable UIC plan.

"Complete information on all the underground injection operations in the country is an initial goal of this project."

"An important aspect of the proposed requirements is the provision for surveying underground injection activity throughout the nation," said Bartelt. "Complete information on all the injection operations in the country is an initial goal of the UIC program."

"At present, there are about 70 or fewer industrial injection wells in Region V," he added. "Everything currently known about these wells indicates that the States are managing these sites appropriately, and that the Federal regulations, when they become effective, will not interfere substantially with the State operations."

Although everyone involved would probably prefer that potentially hazardous materials did not have to be disposed of at all, the fact remains that deep wells are often the best means available. Despite the expense, it can be cost-effective, compared to the alternatives. Despite the complexity of designing and constructing the sites, regulators can ensure compliance with proper procedures. Despite the potential threat to underground sources of drinking water, that water can be protected.

"There's nothing simple about the underground injection process and there's nothing simple about regulating it," said Bartelt. "But it can be properly regulated. It will take cooperation and informed participation at the Federal, State, private industry, and private citizen levels, but it can be done."

Costle: Saving

The Future Expenses

U.S. EPA Administrator Douglas Costle addressed the Consumer Federation's 1979 Assembly on February 7th , in Washington DC, on the subject of evaluating costs and benefits of government regulations. He opened his remarks with, of all things, a reference to a TV ad for oil filters.

"It is rare," Costle said, "that I find television commercials helpful in developing a perspective on national problems. Not once in my meetings with other Administration officials, for example, have I been asked to provide a solution to that widespread social malady known as 'ring-around-the-collar.' But recently I saw a TV commercial that does seem to apply to a current national debate.

"It's an ad for an automobile oil filter. The TV screen shows us a mechanic grimly surveying two cars. One has been brought in to have its oil-filter changed . . . a routine bit of maintenance which, not counting labor charges, will run about four dollars. But the other car has been brought in for a drastic engine overhaul . . . at a cost of several hundred dollars. The reason for the overhaul, the mechanic informs us, is that the owner failed to change the oil filter at the proper intervals.

"Some Federal regulations, enacted in other times, may no longer make sense . . ."

"Thus, the moral of the message is that deferring routine maintenance measures today may save you a few dollars. But such savings today can, a few months or years up the line, put a major dent in your wallet. As the mechanic expresses it, 'The choice is yours: you can pay me now . . . or you can pay me later.'

"That slogan does seem to me pertinent, in one sense, to our current national argument about the impact of health, safety, and environmental regulations on our economy. We are all concerned — justly so — with the impact of inflation on capital investment, on jobs, on productivity, on the value of our dollar at home, and on its shrinking value abroad. Constant debate rages across the financial pages about the merit of tightening up on the money supply, cutting the federal budget, reducing expenditures for welfare or for defense, and so on.

"But in a society as complex as ours, a substantial amount of regulation is necessary."

"As you have no doubt noticed, however, a frequent theme in this debate is that it's time to trim our ambitious efforts in the field of environmental consumer protection, and other health regulation. The goals for many of those efforts — embodied in such laws as the Clean Air and Clean Water Acts — were set in more comfortable times . . . times when, in the old formulation, we could indeed afford both guns and butter.

"But now, the argument goes, growth in GNP is slowing down; industry should be spending its money on new machine tools, not stack-scrubbers; and we have to liberate free enterprise from the crushing burden of Federal regulations that add to cost without any compensating benefit.

"There is, as a matter of fact, some validity to these assertions. As our current experience with 'lower than thou' air fares is demonstrating, some Federal regulations, enacted in other times, may no longer make sense — if they ever did. President Carter has recognized the possibilities for waste inherent in Federal regulation, and has directed agency heads to take a hard look at their rules . . . both the ones that are on the books now, and the ones proposed."

Costle went on to describe the work of the Federal agencies Regulatory Council, of which he is Chairman. Many repetitious and unnecessary government rules have been eliminated by the Council, he said.

"No matter how much progress we make, however," he continued "the fact remains that in a society as intertwined as ours, characterized by a technology as complex and massive as ours, a substantial amount of regulation is necessary. We have to protect health, safety, and environmental integrity in situations where such protection exceeds the jurisdiction or self-interest of any corporation. And a further fact — one we are just beginning to recognize — is this: if, in the name of combating inflation, we reduce or postpone governmental control of potentially harmful

Ourselves Broke

of Deferred Regulation

activities now, we may produce vastly greater costs and inflation later.

"Take, for example, the well-known case of the Love Canal in Niagara Falls, New York. Originally intended to provide hydroelectric power for new homes in a 'dream' community, this three-block-long ditch was converted to a dumpsite in the 1920s. After roughly 30 years of use, it was covered over by the Hooker Chemical Company and sold to the city for a dollar. In the late 1950s, as homes were built around the site, a school was built on top of the old canal.

"Niagara Falls and New York State are still trying to count the costs of that one-dollar 'bargain'." Over the years, 82 chemicals — 11 of them suspected of being carcinogenic — percolated up through the soil as their containers rotted. At first, the results appeared minor: puddles of foul-smelling substances formed, trees and gardens changed color, children returned from play with skin rashes. Then, in the spring of 1978, an investigation by the New York State Health Department turned up a startling incidence of birth defects, miscarriages, and other abnormalities.

Bob Nagel/EPA

"So far, New York State has spent $23 million on cleaning up Love Canal. That expense includes evacuating 239 families, purchasing their homes, performing medical tests on the former residents, installing drainage pipes, and personnel costs for a task force of State employees. Claims against the chemical company are reported to exceed $2 billion. Even these dollar sums exclude costs which we have no way of measuring: the lifelong agony, for example, to one girl born with a cleft palate, an extra row of teeth, and slight mental retardation.

"Niagara Falls and New York State are still trying to count the costs of that one-dollar 'bargain' "

"Perhaps the most appalling fact of all is this: had the proper government regulation been in force at the time, it would have cost Hooker Chemical a maximum of $4 million — that's in current, 1979 dollars — to find, construct, and seal a secure hazardous waste facility. Instead, the public has already spent $23 million . . . and the ultimate cost to former Love Canal residents and to the company is beyond credible calculation.

"Two weeks ago, a trucker and his two sons were convicted in Raleigh of dumping PCBs along roadsides in North Carolina. Handling that waste properly would have cost about $100,000. Unless a simpler, equally safe method can be devised, that contaminated soil will have to be dug up and shipped to a secure site . . . at a cost of up to $12 million.

"Similarly, an investment of about $200,000 at the Life Sciences plant in Hopewell, Virginia would have made it safe for the production of Kepone. The owners' failure to make that expenditure led to the contamination of workers, the Hopewell water-treatment system, and the James River. To date, known judgments against Life Sciences total $12 million; damages awarded workers claiming nerve damage and sterility are unknown, because some are still pending and others have been settled out of court. EPA estimates that it would cost $8 billion to clean up the James . . . if that can be done, ever.

"Each of these examples — and I could cite a dozen others — presents us with a case in which enormous social costs stemmed from the lack of environmental regulation, or from the violation of laws that were in effect. And these cost comparisons do not even include the costs of the damages — the damages that have actually occurred to life, health, and property — that occurred because we were penny wise.

"Estimating the costs of pollution control is — compared to estimating its benefits — a piece of cake."

"The value of these damages are tricky to estimate — but they are, none the less, real. Most aspects of the 'cost' side of the scale are relatively straightforward. The expense of stack-scrubbers, bag-houses, water-treatment equipment, and land for disposal sites can be stated with considerable precision. Losses in productivity caused by the diversion of capital to pollution control devices instead of to new machinery are more difficult to

Costle continued . . .

estimate.

"But estimating the costs of pollution control is — compared to estimating its benefits — a piece of cake. Those benefits run from savings in lives at one end of the spectrum, to aesthetic benefits at the other. In between, you find benefits ranging from savings in property maintenance — not having to paint your house or clean your clothes as often — to the protection of farm and timber crops from saline soils and acid rains."

Costle went on to discuss the find-about by appropriate pollution regulations. He cited the 40 percent reduction in child poisonings involving household products brought about by Federal packaging regulations, the 45 percent drop in crib strangulations since the 1974 crib safety standard went into effect, the 28,000 lives saved in the last eight years by Federal motor vehicle safety regulations, and the Boston Shriners' Burn Institute report that since children's sleepwear standards went into effect, the number of children being treated for sleepwear-related burns dropped from 34 percent of the Institute's cases to zero.

"A misguided sense of thrift could 'save' us broke."

Costle noted that there were, nonetheless, regulations that needed to be eliminated.

"We know there are regulations that are outdated, and suspect that others should not have been written in the first place. We are tring to get both types off the books, and to ensure that others justify in benefits the costs that they impose — as best we can make that judgment given our current state of knowledge.

"What we do not need, however, is a regulatory witch-hunt, for in the interest of reducing costs today, we may create nightmares for ourselves tomorrow — and have to pay a much higher price to recover from them. Out of a misguided sense of thrift, we can 'save' ourselves broke.

"The Santa Barbara off-shore oil rig disaster of ten years ago was one of the great signposts along the road to an American environmental consciousness. That disaster was principally aesthetic. Yet, by crystallizing a continuing national process of environmental degradation into a single, highly visible episode, it united us in demanding that government act where business either could not or would not.

"The Love Canal, it seems to me, is another signpost . . . for this time, the damage is not aesthetic. It suggests that the entire nation is sitting on a lethal garbage dump . . . and that we are either going to have to clean it up, or be destroyed by our own wastes. After considering the costs ahead of us, I shudder.

"But maybe we can learn something from this. One part of the lesson may be that some of the products and by-products of our industrial society are so expensive to human health that we cannot afford them. At a minimum, such products should be priced not only in terms of their market value, but in terms of their total social cost.

"The greater lesson — one we have trouble learning — is that traditional economic judgments may not adequately reflect the real productivity of our land and our people. In terms of population density, we are not a crowded country. But when the massive scope of our technology and the incredible diversity of our products — so many of them synthetic, so many of them alien to the natural repair processes of the earth — are factored into the equation, we must consider the possibility that we are approaching the limits of the ecological elasticity on which our economy ultimately rests.

"We are either going to have to clean up, or be destroyed by our own wastes."

"I began these remarks by borrowing from a television commercial. Let me close by plagiarizing from another.

"For decades, as an airline ad of some years back expressed it, we have been a 'Go now, pay later' society. As an expression of the credit system, pure and simple, this principle — based ultimately on faith in ourselves — has not served us badly. In purchases ranging from refrigerators and vacation trips through new homes, credit has enabled us to enjoy now things we really could not afford now. It has changed us from a nation of renters to a nation of homeowners. It has stimulated demand, created jobs, and provided most of us with a high standard of living. Of course, it has put us deeply in debt, a debt which we ultimately pay off. And when the 'Go now, pay later' principle is extended beyond the purely fiscal realm to the broadly social — when it becomes a state of mind — the associated debt can guide us into national bankruptcy. Little by little, year by year, we can defer payment on our current obligations until — when the bill finally comes due — we find we don't have enough assets to pay it.

"We have made a start toward cleaning up the dirt and damage."

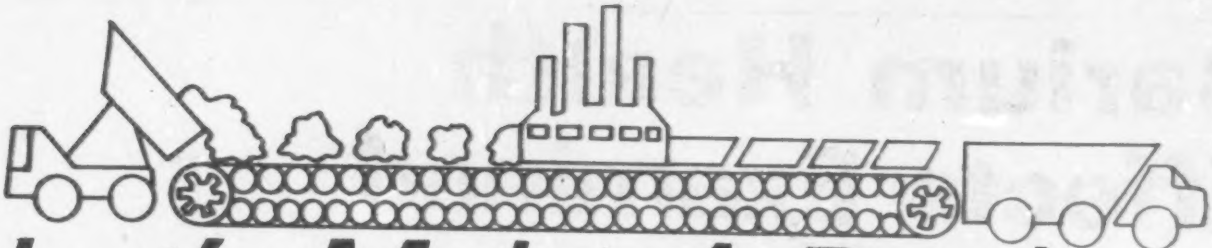
"Our health, safety, and environmental regulations have begun to reverse this process. We are beginning to redress our past profligacy in treating our air, water, and land as goods without limit. We have made a start toward cleaning up the dirt and damage caused by a generation-long vacation financed only by an I.O.U. drawn on the future.

"That future has arrived. That I.O.U. has been presented. The vacation is over.

"I will do my best, as head of EPA and the Regulatory Council, to make sure that every regulation pays its own way in terms of avoiding risk and providing benefit.

"But I will also do my best to prevent a short-sighted, uninformed, intellectually anemic alarm over the immediate costs of regulation from reversing the repair work we have begun on our national home. As the man says, the choice is up to us: we can pay for that work now ... or we can pay for it later.

"We have made the right choice. Let's pay now."



Let's Make A Deal. . .

Industrial waste clearing houses are solving many manufacturing disposal problems

By W.W. Reid

Almost every industrial activity produces waste of some sort. In most cases the waste material can be easily and safely disposed of. The proper handling of industrial waste is a major headache for many industrialists, however. Disposal of these materials can be costly, dangerous, and enough of a problem to persuade factory owners to curtail the business that generates the waste. Indeed, some manufacturers are forced to go out of business altogether.

Fortunately, there are always a few enterprising souls about who can turn a money-losing proposition into a money-making proposition. Such is proving to be the case with some industrial wastes.

Based on the premise that one industry's garbage may be another industry's raw materials, industrial waste exchanges, or clearing houses, are springing up as a result of American businesses' need to find economical ways to dispose of their industrial wastes in an environmentally responsible manner.

Some of the waste exchanges are simply informational in nature; a firm that can not afford to pre-treat the sulfuric acid generated by its electroplating business before putting it into the municipal sewage treatment system may be able to locate another firm that can use it in that business' steel pickling operation. The waste exchange will have information centers where industrial wastes are matched with the raw materials needs of other industries; add names and telephone numbers, and economic necessity and common sense take care of the rest.

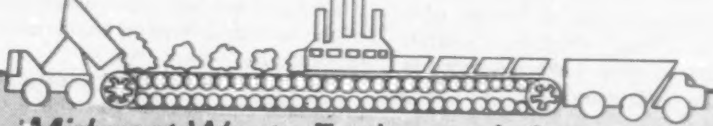
Security and confidentiality of the operation are protected by the use of codes, so that trade secrets aren't revealed.

Some waste exchanges go beyond just providing mutually beneficial information. They actually buy a substance (that is an obnoxious waste to one manufacturer), find another manufacturer (for whom the substance is a highly prized raw material) and make the sale. For the most part, though, these exchanges are nonprofit organizations, such as chambers of commerce, whose primary interest is in solving an industrial problem rather than in turning a profit.

"Waste exchanges can do a lot to alleviate the need for hazardous waste disposal facilities," said Art Baden, spokesman for Region V's Waste Management Branch. "Besides providing alternatives to landfills, waste exchanges help reduce to consumption of natural resources and can lower the costs of waste disposal for many industries."

Some of the materials that were once waste but are now ingredients include: acids, alkalis, spent catalysts, metal processing debris, petroleum derivatives, solvents, wood scraps and sawdust.

Roland Marquart, Transportation Services Manager for the St. Louis Waste exchange said, "More people are aware of the problem of waste disposal. We have had more inquiries from our last listing than ever before. We are getting some 20 to 25 calls every week." ♣



Midwest Waste Exchange Information

Illinois
Environmental Clearinghouse Organization.
Illinois Liquid Waste Haulers Association
3426 Maple Lane
Hazelcrest, IL 60424
(312) 335-0754

Indiana
Environmental Quality Control, Inc.
1220 Waterway Boulevard
Indianapolis, IN 46202
(317) 634-2142

Minnesota
Minnesota Waste Exchange
Minnesota Association of Commerce and Industry
200 Hanover
480 Cedar St.
St. Paul, MN 55101
(612) 227-9591

Ohio
Industrial Waste Information Exchange
Columbus Industrial Association
1515 West Lane Avenue
Columbus, OH 43221
(614) 486-6741

Missouri
Midwest Industrial Waste Exchange
St. Louis Regional Commerce and Growth Association
10 Broadway
St. Louis, MO 63102
(314) 231-5555

For more information, contact: U.S. EPA, Region V, Air & Hazardous Materials Division, Waste Management Branch, 230 S. Dearborn St., Chicago, IL 60604. Phone (312) 353-2197.

Barium Health Effects Examined

Illinois Sets Forth Barium Options

A recent University of Illinois study confirms that standards for barium in drinking water are adequate to protect the public health.

The study found that high blood pressure and heart attack rates were greater than average in communities where the barium level was above 2 parts per million—double the national standard.

"This was the first study done on the human health effects of drinking water containing barium, so these findings are not considered conclusive. Followup studies will be needed to confirm any health effects information," said Don Maddox, chief of the Technical Support Section of EPA Region V's Water Supply Branch.

Barium is a mineral naturally found in deep wells, usually more than 1,000 feet deep. The barium is leached out of the rock formation at these levels and gets into the well water.

Illinois EPA has already compiled information on a number of communities in northern Illinois that exceed the standard in their drinking water. In the Midwest Region, the problem is largely concentrated in these communities. They include Seaton, Shannon, Crystal Lake, Wauconda, Hampshire, Hanover Park, and West Dundee.

"Our job right now is to get those areas in compliance with the national standard," Maddox said. "More information is being gathered from the northern Illinois area. The Illinois EPA is collecting verification samples from the region right now, so we'll have complete information to identify those specific communities and wells having this problem."

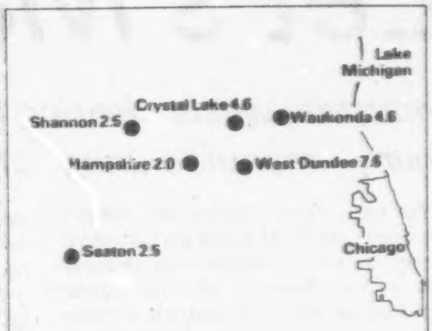
After information is gathered, the communities are required to give public notice of the situation, and then set up a compliance schedule. Citizens of communities with very high barium levels (some exceed the standard up to tenfold) may want to use bottled water until compliance with the standard is reached.

There are several ways a community can lower the barium levels in its water. One is to obtain new sources of water, possibly from more shallow wells that would not contain the mineral. Water from the new well could be blended with the high-barium water to meet the standard, or the old well could be abandoned.

Levels of the well from which most of the barium is coming could also be blocked off.

Conventional water softening processes can be used to remove the barium, as well as other minerals, from the water, These softeners are commonly used in the drinking water industry and are reasonably priced and easy to obtain. The city of Elgin already uses this method of water treatment.

"We are proceeding to work with these communities to develop compliance schedules to meet the standard and assure protection of the public's health," Maddox concluded.



High Barium levels in drinking water

(in milligrams per liter)

Average levels taken from Illinois EPA data

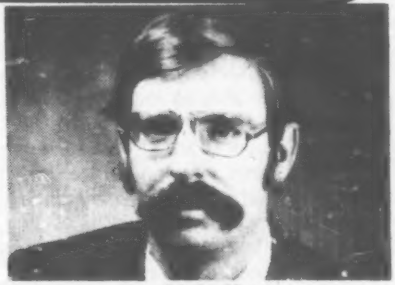
PEOPLE

Charles H. Sutfin has been named as the new Director of EPA's Region V Water Division. He will be responsible for directing the municipal wastewater treatment facility grants program, the water planning program and the drinking water program. He was formerly Deputy Director of the municipal Construction Division at EPA headquarters in Washington.

The new Director of the Air and Hazardous materials Division will be **David A. Kee**, former Chief of the Air Enforcement Branch.

Stufin and Kee are two of four new "supergrades" who have recently been named to head programs at Region V. **Sandra Gardebring** is the new head of Enforcement and **William H. Sanders III** is taking over Surveillance and Analysis.

Charles H. Sutfin



David A. Kee

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E I S COMMENTS

Sponsoring Agency Project Number Type of EIS	Project Location	Description	Summary of Comments	Comment date Rating
Housing and Urban Development D-HUD-F85045-MN (Draft)	Eagan, MN	Blackhawk Park PUD	No major objections	3-8-79 LO-1
Housing and Urban Development D-HUD-F85045-MN (Draft)	Eagan, MN	Lexington South housing development	No major objections	3-8-79 LO-1
Water Resources Council F-WRC-F39007-OH (Final)	Michigan, Ohio, Indiana	Maumee River Basin study of water and land resources	No major objections	3-9-79 (Draft LO-2 1-8-79)
Housing and Urban Development F-HUD-F85022-IL (Final)	Bloomington and Glendale Heights, DuPage IL	Westlake housing development	Previous comments adequately addriessed	3-9-79 (Draft LO-1 8-8-77)
Federal Highway Administration F-FHW-F40106-MI (Final)	Algonac, St. Clair co., MI	1.5 miles of highway construction	Noise comments addressed	3-13-79 (Draft LO-2 5-10-78)
Housing and Urban Development D-HUD-F85044-16 (Draft)	DuPage co., IL	Spring Valley housing development	Major concerns expressed regarding noise levels and long-range ground water supplies	3-11-79 ER-2
Housing and Urban Development D-HUD-F85043-OH (Draft)	Columbus, Franklin co., OH	Independence Village East housing development	Environmental reservations expressed regarding air and water related impacts and noise problems	3-14-79 ER-2
Corps of Engineers D-COE-F36057-OH (Draft)	Clear Creek and Franklin, OH	Stream channel construction for flood control	Potential water quality impacts. Inadequate discussion of up- and downstream impacts, restriction of flood plain development, and alternative plans.	3-16-79 ER-2
Corps of Engineers F-COE-F38004-MN (Final)	Dakota co., Hastings, MN, Lake Rebecca	Recreational development, fish and wildlife enhancement	Previous comments adequately addressed	3-28-79 Draft LO-2 9-26-77)
Federal Highway Administration D-FHW-F40127-WI	Rock co., WI	C.T.H. "A" -- West county line -- Janesville Rd. widening and improvement	No major objections	4-2-79 LO-1

CODE: LO—Lack of objections or minor changes suggested.
CODE: ER—Environment reservations on certain aspects of project; suggest preliminary determination of impact.
CODE: 2—Insufficient information, EPA cannot fully assess project but can make further study of modifications or alternatives.

All Region V EIS Comments are prepared by the Office of Federal Activities, Environmental Impact Review Staff. For information contact Barb Taylor at (312) 363-2307, U.S.

News...News...News...News...Around The Region

"News Around the Region" is a new section of updates on news events and environmental programs in Region V States. Where "Environmental News Briefs" focus primarily on U.S. EPA activities, this section will cover State agency milestones, State legislation, notable local events, and, occasionally, a national story significant to the Region.

National

- A nine-agency Federal panel on resource conservation split its vote on a recommendation for a national "bottle bill" banning throwaway beverage containers. EPA Deputy Administrator Barbara Blum, who chairs the panel, voted for recommendation. So did the Departments of Interior and Energy, and the Council on Environmental Quality. The Department of Commerce and the Council of Economic Advisors voted against recommendation. The Treasury abstained, and Labor and the Office of Management and Budget want to wait and see what happened with State bottle bills around the country. The group will report to the President on options for action.

- U.S. Sen. John Glenn of Ohio, and Sen. Charles Percy of Illinois have introduced legislation to give States veto power over Federal plans for nuclear waste sites. The State's objection would block any plan under the proposed legislation, unless both houses of Congress acted to override within 60 days.

Illinois

- The House Environment committee voted nine to four not to approve a State bottle bill, which called for a five-cent deposit on each beverage container and a ban of pull-tabs.
- Legislation has been introduced to place stringent guidelines on hazardous waste disposal. The measure would set tougher requirements for permits, and would prohibit sites within one mile of a town, in a geologic fault zone, over an abandoned coal mine, or within one-half mile of any drinking water supply.
- A circuit court judge has ordered Nuclear Engineering Company (NECO) to return to Sheffield, IL and continue monitoring and securing its nuclear waste disposal site there. NECO had announced it was abandoning the site and terminating its lease. A Nuclear Regulatory Commission (NRC) site inspection showed that some of the barrels of radioactive waste were exposed above ground.

Michigan

- EPA has given Wayne County the go ahead to being designing a portion of the so-called Super Sewer. County officials requested a 69-mile-long system; EPA authorized design of a 30-mile section, requesting more study on the rest of the plan.
- A hazardous waste management proposal will be introduced to lawmakers by mid-June, after 60 days of public hearings. The proposal will deal with site selection, State operation of sites, and a State supervisory commission.
- The DNR wants to bury more PBB-contaminated cattle at Mio, if they can get legal support from the attorney general to override a prohibiting local ordinance
- State and local officials may prosecute a waste hauler who allegedly dumped 2,000 gallons of 2,4,5-T soon after the EPA ban on the herbicide, which contains dioxin, one of the most toxic substances known to man. DNR is standing by to clean up the 6,000 cubic yards of contaminated soil, located south of Howell, midway between Lansing and Detroit.
- A bill establishing a State hazardous waste facility site review board has been introduced. The board would have final decision on siting of facilities, and would represent several State agencies and the locality under consideration.
- Committees in both houses of the legislature have approved a heavily amended wetlands bill. That bill now goes to the floor, where a lengthly debate is expected. The amendments grant partial exemptions to various special interest groups, including farmers, mining firms, and public utilities.

Minnesota

- A State Senate subcommittee has approved a tax-incentive plan for wetlands conservation. Under it, marshes and sloughs would not be taxed, and owners would get a tax credit for not draining the areas.

Ohio

- The House Agriculture and Natural Resources Committee will conduct on-site, unannounced inspections of hazardous waste disposal facilities in the State. Also before that committee is a bill to allow voters to decide whether to allow a facility in their county, and bills regulating abandoned sites, and transportation of waste.
- The bottle bill issue in Ohio will probably be decided by the voters in November. If the legislature doesn't act by May 4, or defeat the bill, as expected, 88,000 petition signatures will be needed to get it on the ballot.
- A Clermont County judge has taken under advisement a motion to dismiss the $1 million damage portion of a lawsuit brought by the operators of a hazardous waste landfill against township officials and an environmental group. The company claims that those parties are liable for damages caused by their efforts to close the facility.

Wisconsin

- A bill has been introduced to split the DNR into divisions of conservation and environmental protection.
- Eight out of ten people in the State are very concerned about the environment, according to a survey by the Survey Research Lab. Almost half the 659 people surveyed listed the environment as one of their two greatest concerns. The survey showed that sixteen percent of Wisconsin residents belong to an environmental group -- that's twice the national average.

Environmental news briefs...briefs...briefs...briefs...

Radium Plant Site Found Safe

The search for long-forgotten radioactive waste dumps from old radium mines in Denver has turned up sixteen such sites in downtown Denver, and one on the South Side of Chicago.

The Carnotite Reduction Company stood at 2600 Inglehart Court, (which is now 26th St. and Martin Luther King Jr. Dr.) until the 1920's when the uranium processing plant was moved to Denver.

Peter Tedeschi, regional chief of the EPA radiation program, recently checked out the site.

"It's radioactive there, but it's not a hazard to anyone," Tedeschi reported after his screening of the area. "It's no problem"

The site is especially safe because no one lives in the immediate area. "No one stays here for any length of time," Tedeschi said. "Cars just pass by. A person would have to stay on the site for 8 to 10 years before he got radiation exposure equal to that from one medical x-ray."

Carnotite operated the plant in Chicago to supply the widespread medical use of uranium. "They used to take radium baths," said Tedeschi. "It was considered a kind of cure-all." Radium was also injected into the bloodstream until radiation dangers were documented.

The company disposed of most of its radioactive wastes by burying them on the plant site.

Recent discoveries in Denver had led officials to be concerned about the Chicago site, but Tedeschi's tests showed no cause for alarm.

Minnesota Proposes Pretreatment Program

The State of Minnesota has proposed a publicly owned treatment works (POTWs) Pretreatment Program, and has requested EPA approval. The program will supplement the National Pollutant Discharge Elimination System (NPDES) permit program which the State has been administering since June, 1974. If the Pretreatment Program is approved, Minnesota's program will be the first in the Region.

The Pretreatment Program, authorized by the Clean Water Act of 1977, limits the types and quantity of pollutants that may be discharged by industries into municipal sewers. It also seeks to improve the recycling and reclamation of industrial wastewater and sludge.

Together with the NPDES permit program, the Pretreatment Program will assure better wastewater control and will help bring Minnesota's dischargers into compliance with Federal and State clean water standards.

All interested citizens are invited to send their comments, objections, or requests on the Minnesota Pretreatment Program to: U.S. EPA, Region V, Enforcement Division, 230 S. Dearborn Street, Chicago, IL 60604, Attn: Public Notice Clerk. Telephone: (312) 353-2105.

All comments must be received, in writing, by June 4, 1979 will be considered by the EPA Regional Administrator before making his decision.

Landfill Guidelines Proposed

EPA has proposed guidelines for the more than 20,000 landfills around the country. The guidelines recommend practices for site selection, design, construction, operation, and maintenance of landfills.

These guidelines are proposed under authority of the Resource Conservation and Recovery Act (RCRA). Their purpose is to present ways that the mandatory performance standards required under Section 4004 of the RCRA regulations can be met. They will take effect after a 90-day public comment period.

The guidelines apply to landfills of municipal refuse, sewage sludge, industrial, and other waste. Hazardous waste disposal, however, is subject to other regulations proposed last December.

Bob Nagel/EPA

In site selection, water conditions, geological features, social and economic factors, and environmental impacts are to be taken into account.

The guidelines set forth numerous design considerations, and recommend practices for control of gas migration, surface water runoff, and groundwater monitoring. A large part of the guidelines is devoted to control of leachate, the liquid containing dissolved and suspended materials from the waste.

The proposed guidelines appeared in the Federal Register of March 26, 1979. Copies are available from Ed Cox, U.S. EPA, Office of Solid Waste, Publications Distribution, 26 W. St. Clair, Cincinnati, OH 45268.

briefs...briefs...briefs...briefs...briefs...briefs...briefs...

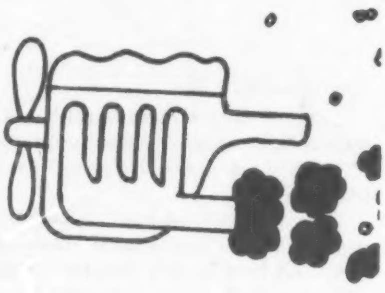
Auto Pollution Control Demonstrated

EPA's automobile demonstration engine made its debute at the Federal Plaza in Chicago, April 30. The blue and chrome 302 cubic inch V8 engine, mounted on a boat trailer and attached to numerous pollution gas analyzers, illustrated to plaza crowds the relationship between engine maintenance, pollution, and fuel economy.

"It's a real beauty," said Rick Barrett, a Colorado State University engineer who helped build the demonstration model. "This engine provides eyewitness evidence that pollution control and fuel economy get along together just fine."

The engine is available to any agency or organization that wished to display auto emission controls in action. It already has been scheduled for State Fairs in Wisconsin, Michigan, and Ohio during August.

For more information, contact your State agency responsible for implementing Inspection and Maintenance programs, or Kent Kozina at U.S. EPA, Region V, Air Programs Branch, 230 South Dearborn, Chicago, IL 60604, (312) 353-2205.



Bob Nagel/EPA

Michigan Awarded Funds for Toxics Control

EPA has awarded $504,500 to Michigan's Department of Natural Resources to develop a toxic substance control program.

Michigan's program, to be called a "Critical Materials Program", will identify potential toxic substances problems through analysis of data already available in DNR files.

Five States throughout the country have received funds under this grant program. These grants are the first to be awarded under the 1976 Toxic Substances Control Act (TSCA).

New Railroad Noise Regs Proposed

Expanded noise regulations for the nations's railroads have been proposed by the EPA.

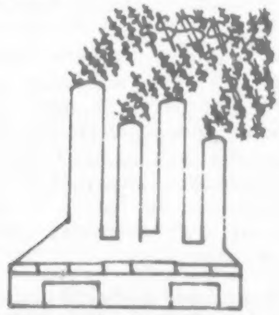
EPA established standards in 1975 to control noise from locomotives and rail cars. The new regulation extends that authority to address noise from other facilities and equipment.

The proposal sets limits on the level of noise that may reach people residing or working on developed property adjacent to railroad yards. Standards are also set for three specific yard sources: "hump" yard retarders, refrigerator cars, and rail car coupling operations. Hump yards use a gravity feed system to assemble trains. Rail cars are pushed over the crest of a man-made hill, and are switched to appropriate tracks while coasting down the other side. The noise made when the cars come in contact can be very disturbing to surrounding communities.

The proposed regulation sets an average 24-hour noise level of 70 decibels at or beyond developed property near rail yards. These limits apply to all rail yards and become effective January 1, 1982. (70 decibels is roughly equivalent to the sound of freeway traffic, or a man's voice at three feet.)

The proposed regulation appeared in the Federal Register on Tuesday, April 17, 1979. The 45-day public comment period ends June 1, 1979. Address comments to : Rail Carrier Docket, ONAC 79-01, Office of Noise Abatement and Control, ANR-40, U.S. EPA, Washington, DC 20460.

Air Cleanup Can Save Billions



Bob Nagel/EPA

Health benefits from cleaning up air pollution particulates are much higher than previously thought, says a recent EPA-sponsored study. Researchers found two major health benefits of particulate pollution control: more worker time on-the-job, and increased productivity of people with illnesses associated with air pollution.

The researchers indicate that a 60 percent reduction of air pollution particulates would result in more than $40 billion in annual savings -- $36 billion for decreased illness and $4 billion for reduced mortality.

Between 1970 and 1977 particulate matter in the air was reduced by 12 percent. That would amount to a health savings of $8 billion.

Single copies of the study summary, and the complete 4-volume report are available from the Technical Information Office, RD-674, Washington, DC 20460, telephone (202)426-9454. Copies of all volumes will also be available from the National Technical Information Service, Springfield, VA 22161.

NOV's

- Mobil Oil, Lebanon, OH; hydrocarbons.
- Marathon Oil, Columbus, OH; organic.

briefs...briefs...briefs...briefs...briefs...briefs...briefs...

Region V Tackles Hazardous Waste

EPA has announced a stepped-up program to force the cleanup of hundreds of old dumpsites throughout the country containing toxic chemicals and other hazardous wastes.

The Agency is assembling legal and technical teams which, working closely with the States, will take legal and other measures necessary to eliminate hazards from abandoned or inactive dumpsites whose contents may be threatening the environment and the health of millions of Americans.

Regional personnel will be screening sites to evaluate hazardous waste management facilities. They will investigate sites that have been brought to EPA's attention by the States, citizens, or other means. The screening process will include on-site inspections in some cases, and will deal with both active and inactive sites.

EPA officials from all Regions and headquarters will also meet with officials from the Department of Justice, in Denver, at the beginning of May to establish procedures and methods for investigating and preparing cases on inactive sites.

Bob Nagel/EPA

Satellite to Check Atmospheric Pollution

A NASA satellite rocketed into orbit last month to try and determine if man is polluting the stratosphere, a fragile atmospheric region that helps control the climate and amount of solar radiation that reaches Earth.

Information gathered by the satellite will be useful to EPA in assessing scientific theories about the effects of pollution. For example, many scientists believe that increased coal use could affect the stratosphere and produce a "greenhouse effect," warming up the Earth, melting the polar ice caps, and flooding coastal areas.

The 324-pound satellite was launched successfully from its coastal base in Virginia, and is being tracked by NASA.

Michigan to Manage Clean Water Program

The State of Michigan has assumed primary management of Federal funds for municipal sewage treatment plant construction.

The Michigan Department of Natural Resoufces (DNR) will be responsible for administering more than $7 million in initial Federal grants through January, 1981, which will enable the State to provide 75 percent funding for publicly awarded waste water treatment facilities that help achieve national clean water goals.

The EPA-DNR agreement is the fourth such agreement in the Midwest Region. Illinois and Wisconsin assumed primary management of the programs in those States in 1978, and Minnesota assumed its program in April, 1979.

Good News from Lake Erie

Lake Erie is no longer deteriorating at the rate it was 10 years ago, and has begun to improve, according to preliminary data from an intense study of the lake.

The study was begun last spring, and will take another year. Twenty sampling sites were visited via helicopter twice each during the winter to monitor pollution conditions.

Samples showed less phosphate in lake Erie, and there are indications the lake's algae problem is becomiong less severe.

Reasons for this improvement include better municipal sewage treatment, better cleaning of water by industries and controls on phosphates, which nurture algae growth.

2,4,5-T Suspension Upheld

The Federal District Court in Flint, Michigan has denied a request by Dow Chemical Co. and other pesticide makers to stay EPA's recent emergency suspension of the herbicides 2,4,5-T and silvex.

As a result, the temporary ban on most uses of these week killers will remain in effect at least until the conclusion of EPA administrative hearings that began April 19.

The court ruling was made on April 12 by Judge James Harvey. Dow's suit was filed on March 6.

EPA issued the emergency suspension on March 1 based in part on studies indicating that women living near Alsea, Oregon suffered an abnormal miscarriage rate from herbicide spraying in nearby forests.

EPA Studies Toxic Risks

Toxic substances are emphasized in EPA's new five-year research and development plan covering 1979-84.

Two major goals have been established for the toxics program: 1. to characterize the nature and extent of risk; 2. and to develop control strategies that will prevent or minimize exposure to hazards.

One objective of the program will be to improve methods for determining dose/effect relationships. Another is to determine causal relationships between toxic substances, acting alone or in combination, and environmentally induced health problems.

CONSTRUCTION GRANTS

Applicant	Award Amount	Date
ILLINOIS		
Buckely	62,475	3-22
Kingston	750	3-19
Mansfield	1,425	3-23
New Baden	35,700	3-20
Elmwood	4,050	3-6
Nilwood	375	3-6
Anna	3,000	3-28
Dakota	7,050	3-26
German Valley	9,000	3-26
Sublette	12,000	3-28
Carbondale	5,925	3-22
Jonesboro	31,500	3-16
Barrington	19,275	3-9
Decatur	153,300	3-12
Sterling	336,150	3-22
Elburn	4,800	3-22
Sycamore	273,675	3-6
Barrington	39,000	3-5
Chicago Metropolitan Sewer District	114,492,375	3-26
Gilman	255,150	3-19
Streamwood	591,000	3-8
Mt. Carroll	730,950	3-27
Indiana		
Burlington	1,875	3-22
Rome City	47,013	3-22
Tipton	570,760	3-6
Garrett	1,030,725	3-15
Valparaiso Lakes co.	75,450	3-28
Schererville	207,300	3-27
Michigan		
Genesee Co.	89,925	3-23
Delta Charter	4,125	3-6
Grant	12,750	3-12
Sparta	67,500	3-6
Cedar Springs	30,675	3-27
Bergland	2,411	3-15
Grand Rapids	118,875	3-30
Manton	20,400	3-30
Evart	15,000	3-6
Clinton	41,250	3-27
Manistique	18,075	3-22
Kalamazoo	277,725	3-22
Pavilion	103,425	3-19
Portage	5,288,150	3-19
West Travers	70,275	3-22
Roscommon co.	127,200	3-27
Jonesville	369,675	3-6
Detroit	4,351,500	3-30
Plainwell	2,933,025	3-19
Essexville	64,575	3-20
Minnesota		
Minnesota Pollution Control Agency	1,682,190	3-14
Lafayette	15,600	3-27
Rushford	2,775	3-23
Winsted	915	3-22
Barnum	17,175	3-21
Parkers Prairie	18,825	3-26
Virginia	45,000	3-21
Sacred Heart	6,375	3-19
Park Rapids	31,800	3-26
Ulen	12,000	3-26
Rothsay	15,900	3-26
Kensington	14,775	3-28
Menahga	22,350	3-27
Red Wing	3,000	3-30
Austin	63,150	3-30
Mountain Iron City	51,300	3-30
Silver Bay	8,400	3-14
Rockford	24,900	3-16
Beaver Bay	276,225	3-6
Metro Waste Control Comm.	1,381,650	3-12
Cologne	2,700	3-30
Wanda	10,050	3-30

Applicant	Amount	Date
Miltona	9,900	3-30
Hinckley	21,750	3-30
Alberta	11,775	3-30
Braham	25,650	3-30
Blackduck	18,825	3-30
Kettle River	10,425	3-30
Howard Lake	39,225	3-30
Erskine	21,450	3-30
Ellsworth	16,125	3-30
Clearbrook	18,300	3-30
Ohio		
Springfield	161,550	3-15
Buckeye Lake	7,800	3-22
Greene co.	216,450	3-15
Guernsey	116,775	3-15
Conneaut	146,250	3-19
Orrville	189,300	3-30
Twinsburg	52,950	3-30
Frazeyburg	24,825	3-19
Broadview Heights	1,875	3-9
Lowell	24,975	3-26
Powhatan Point	36,300	3-2
Mercer co.	14,475	3-6
Youngstown	10,050	3-9
Commercial Point	2,250	3-6
Hicksville	56,400	3-12
Piqua	3,156,300	3-30
Tuscarawas co.	443,700	3-12
Columbus	79,350	3-19
Warsaw	109,125	3-23
Mahoning co.	162,975	3-2
Mahoning co.	258,300	3-2
Antwerp	2,982,975	3-5
Belpre	1,963,800	3-14
Sycamore	1,657,425	3-20
Gratis	1,715,925	3-27
Harrod	1,078,800	3-27
New Concord	1,236,750	3-26
Wisconsin		
Spring Valley	12,750	3-22
New Lisbon	31,500	3-20
Manawa	15,225	3-5
Mayville	4,950	3-9
Elroy	11,700	3-20
Waupun	7,725	3-21
Columbus	8,250	3-23
Fontana -on -Geneva Lake	40, 275	3-22
Blair	15,900	3-22
Grafton	63,375	3-21
Barneveld	8,850	3-12
Abbotsford	6,900	3-9
Wausau	452,400	3-21
Junction City	16,125	3-26
Ashland	91,350	3-20
Fox Lake City	33,750	3-14
Florence Water & light co	9,075	3-9
Bell	11,175	3-26
Clover	12,750	3-20
Hill Point	11,775	3-19
Madison	55,275	3-9
Viola	14,400	3-6
Delavan Lake	1,182,225	3-6
Cedar Grove	25,950	3-15
Random Lake	195,000	3-27
Lancaster	26,475	3-6
Delavan Lake	10,217,250	3-23
Coleman	900,450	3-27
De Pere	1,090,725	3-23
Fond du lac	2,339,625	3-23
Stockbridge	50,475	3-23
Walworth co.	15,052,800	3-19
Milwaukee	2,759,175	3-30
Black Creek	30,836	3-30
Fond du lac	21,000	3-30

FEDERAL REGISTER

March 13, 1979 — Rules: Air quality implementation plans; approval and promulgation; various States, etc.: Maryland. Air quality implementation plans; delayed compliance orders: Ohio. **Proposed Rules:** Ocean dumping: Denial or restrictions of disposal sites. **Notices:** Pesticides, emergency exemption applications: Ferriamicide. **March 14, 1979 — Rules:** Air quality implementation plans; delayed compliance orders: Indiana. **Proposed Rules:** Air pollution control, new motor vehicles and engines: Trucks and vehicles, light duty, diesel; particulates emission standards; meeting. **Notices:** Meetings: Science Advisory Board. Pesticide registration, cancellation, etc.: Roundup. 2,4,5-T and Silvex; prehearing conference. Pesticides: emergency exemption applications: Benomyl, Permethrin. Pesticides; experimental use permit applications: Forest Service et al. Pesticides; temporary tolerance exemption: Hirsutella thompsonii. Pesticides; tolerances in animal feeds and human food: Chlorphyrifos. **March 15, 1979 — Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: Louisana, Massachusetts. Air quality implementation plans; delayed compliance orders: Iowa (2 documents), Kansas, Minnesota, Missouri, Ohio, Washington (4 documents). **Proposed Rules:** Air pollution; standards of performance for new stationary sources: Sulfuric acid plants. Air quality control regions; criteria and control techniques: Attainment status designations. Air quality implementation plans; approval and promulgation; various States, etc.: Alabama, Massachusetts, Nevada. Air quality implementation plans; preparation, adoption, and submittal: Tall stacks; extension of time. Water pollution control: Hazardous substances; determination of reportable quantities; extension of time. **Notices:** Pesticide registration, cancellation, etc.: Coal tar, creosote, and coal tar neutral oils; correction, Silvex (3 documents), 2,4,5 T (3 documents), 2,4,5-T and Silvex. Pesticide use and production by veterinarians; policy statement and inquiry. Pesticides; temporary tolerances: 4-Amino-6-(1,1-dimethyl-ethyl)-3-(methylthio)-1,2,4-triazin-54*H*)-one, Ethanedial dioxime. Water pollution: Toxic substances; water quality criteria; inquiry. **March 16, 1979 — Proposed Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: Wyoming. **Notices:** Air programs; fuels and fuel additives: Coverage and exclusions; "substantially similar"; interpretation. Toxic and hazardous substances control: Chemical substances for commercial use, new; premanufacture testing guidance. **March 19, 1979 — Rules:** Air pollution control; new motor vehicles and engines: Technical amendments; correction. Air quality control regions; criteria and control techniques. Attainment status designations. Air quality implementation plans; approval and promulgation; various States, etc.: New Jersey. **Notices:** Environmental statements; availability, etc.: Agency statements, weekly receipts. **March 20, 1979 — Rules:** Air pollution control, new motor vehicles and engines: Certification and test prodecures; technical amendments. Air quality implementation plans; approval and promulgation; various States, etc.: California (2 documents). Air quality implementation plans; preparation, adoption, and submittal: Air pollution emergency episodes; preparation of contingency plans procedures. **Proposed Rules:** Air pollution; standards of performance for new stationary sources: Petroleum refinery Claus sulfur recovery plants; definition of small refinery. **Notices:** Committees; establishment, renewals, terminations, etc.: Interagency Toxic Substances Data Committee. Grants, State and local assistance: Treatment works construction; draft Innovative and Alternative Technology Assessment Manual; availability. Pesticide registration, cancellation, etc.: Bolstar 6. **March 21, 1979 — Rules:** Air quality implementation plans; delayed compliance orders: Colorado. Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: Terbacil. **Proposed Rules:** Air pollution; standards of performance for new stationary sources: Iron and steel plants; basic oxygen furnaces; advance notice. Air programs; approval and promulgation; State plans for designated facilities and pollutants: New Jersey et al. Air programs; assessment and collection of noncompliance penalties. Ocean dumping: Secondary treatment requirements for discharges into marine waters; draft technical support document; availability. **Notices:** Air quality implementation plans; approval and promulgation: Prevention of significant air quality deterioration (PSD); final determination. Meetings: Science Advisory Board (2 documents). Pesticides; emergency exemption applications: Mesurol. Permethrin. Water pollution control: Clean Water Act, Safe Drinking Water Act and Resource Conservation and Recovery Act programs; guidance for FY 1980 State-EPA agreements. Water pollution control; safe drinking water; public water systems designations: New Jersey. **March 23, 1979 — Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: Maine. Energy programs: Fuel economy retrofit devices; test procedures and evaluation criteria. Freedom of information; confidentiality of business information; clarification. Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: Gibberellins. Glyphosate. Pesticides, tolerances in animal feeds and human food: Glyphosate. **Proposed Rules:** Air quality implementation plans; delayed compliance orders: Ohio. **Notices:** Toxic and hazardous substances control: Asbestos-containing materials in school buildings; nationwide information and technical assistance program. **March 26, 1979 — Proposed Rules:** Waste management, solid: Landfill disposal; guidelines. **Notices:** Environmental statements; availability, etc.: Agency statements, weekly receipts. **March 27, 1979 — Rules:** Pesticide programs: Compensation for use of data in support of registration applications; notification to Agriculture Secretary. Conditional registration; interim rules; notification to Agriculture Secretary. Experimental use permits; authority for issuance by States; notification to Agriculture Secretary. **Proposed Rules:** Air quality control regions, creteria, and control techniques: Visability goal for Federal Class I areas, national; identification; correction. **Notices:** Pesticides, emergency exemption applications: Ferriamicide. Pesticides; temporary tolerances: Ethofumesate. S-(4-Chlorophenyl-methly) diethylcarbamothioate. Pesticides; tolerances in animal feeds and human food: Elanco Products Co. Toxic and harzardous substances control: Toxic pollutants; list; guidance on petitions to revise. Toxic pollutants; list; petition to remove aromatic haloethers. **March 28, 1979 — Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: California. Louisianna. Oklahoma. **Proposed Rules:** Air programs; approval and promulgation; State plans for designated facilities and pollutants: Arkansas and Louisiana. Air quality implementation plans; delayed compliance orders: Minnesota. Utah (2 documents). Washington. Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: Linuron. **Notices:** Meetings: Science Advisory Board. Pesticides; experimental use permit applications: Ethofumesate, etc. Metolachlor, etc. (2 documents). Pesticides; temporary tolerances: Metoachlor. Solid waste disposal practices: Iron and steel industry; report availability. Mining; report availability. Toxic and hazardous substances control: Chemical substances for commercial use, new; premanufacture testing guidance; correction. **March 29, 1979 — Rules:** Air quality implementation plans; delayed compliance orders: Ohio (2 documents). **Notices:** Pesticide registration, cancellation, etc.: Coal tar, creosote, and coal tar neutral oils; correction. Toxic and hazardous substances control: TSCA Interagency Testing Committee report to EPA; priority consideration chemicals for testing; extension of time; correction. Water pollution control; safe drinking water; public water systems designations: New Jersey. **March 30, 1979 — Rules:** Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: Glyphosate. Inert ingredients. Methomyl. **Proposed Rules:** Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: 0,0-diethyl 0-(2-isopropyl-6-methyl-4-pyrimidinyl) phosphorothioate. Primary nonferrous smelter orders; comments period extended. **Notices:** Pesticide registration, cancellation, etc.: Atrinal liquid concentrate. Pesticides; emergency exemption applications: Sodium cyanide in M-44 device. Pesticides; experimental use permit applications: Pesticides; temporary tolerances: Ethephon. **April 2, 1979 — Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: Maryland. Pesticides, tolerances in animal feeds: Tebuthiuron. Water pollution; effluent guidelines for certain point source categories: Coal mining catastrophic precipitation exemption. **Proposed Rules:** Air quality control regions; criteria and control techniques: Arizona. Kentucky and Alabama. Air quality implementation plans; delayed compliance orders: Georgia (3 documents). Mississippi. Water pollution; effluent guidelines for certain point source categories: Best conventional pollutant control technology; publicly owned treatment works; new data for cost computations. **Notices:** Environmental statements; availability, etc.: Agency statements, weekly receipts. Pesticides; temporary tolerances: Tebuthiuron. Toxic and hazardous substances control: Confidential data; release to contractors. **April 3, 1979 — Notices:** Pesticides experimental use permit applications: Carbaryl. **April 4, 1979 — Rules:** Air pollution control, new motor vehicles and engines: Light duty vehicles, hydrocarbon emissions, 1980 and 1981 model years. Air quality implementation plans; approval and promulgation; various States, etc.: Alabama. Connecticut. Ohio. Tennessee. Washington.

1979 calendar

MAY 2, 3, 10

EPA's Midwest Regional Office is conducting technical meetings on asbestos hazards in midwest schools as part of the U.S. EPA's assistance program to remove the health risk caused by damaged or deteriorating asbestos surfaces in schools. Meetings will be held in the following cities: Detroit, MI, May 2, Howard Johnson (Downtown), 10 a.m.-noon; Minneapolis, MN, May 3, Curtis Hotel, 10 a.m.-noon; Milwaukee, WI, May 10, Midway Motor Inn (Airport), 10 a.m.-noon. For more information, call toll-free: (800) 621-3191.

MAY 4-6

The 27th Annual Outdoor Education Conference, to be held at the Lansing School District Environmental Center. Presented by the Michigan Outdoor Education Association. For more information, call Dave Cross at (517) 374-4344.

MAY 14-15

Rural Water and Sewer Conference, one of a series of conferences being held around the nation as part of the President's effort to ensure that rural water and sewage problems receive appropriate action. Participants will review procedures for obtaining Federal assistance from a variety of sources for setting up rural water cleanup programs. At the Bismark Hotel, 171 W. Randolph St., Chicago 60601, phone (312) 236-0123 for reservations. For information on conference topics, call Region V EPA, (312) 353-2072.

May 7-8

EPA will hold hearings in Chicago to give the public the chance to comment on proposed EPA regulations that govern the assessment and collection of penalties against certain types of air polluters. The penalties, required by Section 120 of the Federal Clean Air Act, will apply to most stationary sources of air pollution, such as factories, refineries, and power plants. If proposed regulations are approved, EPA will assess the penalties through administrative rather than court action. In each case, the penalty will equal the amount that an air polluter saved by not complying with clean air standards. The public hearings will be in the Adams Room of the Midland Hotel, 172 W. Adams st., Chicago. On May 7, the hearings be at 9:30 a.m. and again at 7:30 p.m. The May 8 session will be at 9:30 a.m. Persons wishing to make statements at the hearings should notify Robert Homiak, Division of Stationary Source Enforcement (EN 341), U.S. EPA, 401 M St. SW, Washington, DC 20460, phone (202) 755-2580.

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June 1979

EPA

ENVIRONMENT MIDWEST

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JUN 6 1979

Summer Lake Polluted?
Start "Snooping" . . . story on page 12

RADIATION WATCH

Region V Monitoring and Emergency Response Program

If Three Mile Island happened within the boundaries of Region V, Pete Tedeschi would be there. Tedeschi is head of EPA's Regional radiation program, and he's also part of the Interagency Radiological Assistance Plan (IRAP).

IRAP, an emergency response team, would be called out if an accident occurred that could involve contamination of air, water, food supply, land areas, or facilities that could pose a hazard to the general public. IRAP's members are thirteen diverse Federal agencies — from Agriculture to the Postal Service, from the Department of Commerce to Transportation.

Personnel at each of the thirteen agencies have been trained to respond to emergencies where the general public could be exposed to radiation as a result of an accident.

"The basis for this emergency response action is that we want people to get no radiation exposure at all," said Tedeschi. "Everything we do is designed to that end."

If there was an accident at a truck loading site in Chicago, and there was a radiation leak, Tedeschi would be the first one called if his downtown office was close to the problem.

"If there was a transportation accident of some sort in Chicago, I'd go out there and take radiation readings and delineate exactly where the hazar-

(clockwise, starting from upper left) **Pete Tedeschi, EPA Region V Radiation Specialist, shows how the Air Sampler collects dust particles. Tedeschi shows the filter from the Sampler. The filter is then placed in a radiation counter, to measure the radiation present in the atmosphere. This process is part of EPA's Ambient Radiation Environmental Monitoring System (AREMS).**

Photos by Art Beden/EPA

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dous area was. Then I'd rope off the area, and try to shield and contain the source of radiation," Tedeschi said.

"When we go out on an emergency response, our objective is to get the general public's exposure level to zero as soon as we can. We're given guidelines for safe exposure, but those are only guidelines. The safest level is zero, and that's what we have to aim for," said Tedeschi.

The Nuclear Regulatory Commission (NRC) guidelines for general public exposure are 100 millirems (mRem) over a seven consecutive day period. The actual exposure in Pennsylvania was about 25-30 mRem, or about the radiation from one chest x-ray.

Overall, the NRC is responsible for regulating what goes on inside nuclear plants and facilities, as well as radiation reaching beyond the boundaries of those facilities. This regulation is done through setting and enforcing licensing standards.

But many other Federal and State agencies also have radiation programs, so they will often send experts to an accident site. After the experience gained at Three Mile Island, planning is underway to optimize the organization and effectiveness of this inter-agency response.

Tedeschi is working with the States to get response plans organized. "We try to resolve any problem they may have in getting a complete emergency program together. Sometimes there are conflicts between State agencies as to who will lead accident response. But we usually find that the State's emergency response plan for other emergencies can be adapted to radiation with no problems," Tedeschi said.

How often does EPA Region V have to deal with radiation accidents?

There haven't been any emergency response actions under IRAP since the beginning of the radiation program in the Region. But Tedeschi does regularly deal with small accidents. Most recently, there was a fire at a plant in Wisconsin that uses radioactive thorium. The town's fire chief called EPA for advice on how to keep the radiation contained. Tedeschi advised him of the necessary safety precautions. Since thorium is an NRC controlled material, the NRC was also notified of the fire, and the situation was fully investigated and controlled by them.

> *". . . our objective is to get the general public's exposure level to zero . . ."*

On a regular basis, EPA is also responsible for monitoring radiation in the environment. The Agency operates Ambient Radiological Monitoring Stations throughout the Region, to test air samples for radiation. These air monitoring and water collection stations are in every State.

This network of stations was formed to provide information for standard-setting, on environmental trends, to monitor population exposure to routine and accidental radiation releases, and to provide an early warning system for emergency action.

As part of this regular program, EPA stations throughout the country have monitored increases in radiation levels during recent nuclear tests in China. Fallout from these tests have drifted halfway around the Earth, reaching monitoring stations across the U.S., including Region V. EPA watched these tests very carefully, although none of the reports showed radiation anywhere near levels that would affect human health.

by Nancy McKinney

EPA's Radiation Responsibility

The licensing and monitonng of nuclear facilities is carried out by the Nuclear Regulatory Commission (NRC). Radiation that occurs in the environment outside the boundaries of these facilities is EPA's responsibility. EPA's radiation program is designed to protect the environment and the general public by setting and enforcing radiation standards. The Agency is responsible for managing radiation protection provisions of these Federal measures:

National Environmental Policy Act of 1969— requires EPA to review Environmental Impact Statements that must be filed on any nuclear facility, either research or commercial. A nuclear power plant cannot be approved until it has received a comprehensive environmental impact review.

The Atomic Energy Act of 1954— gives EPA its "Federal guidance function", requiring the Administrator to provide overall guidance on all radiation protection matters that could have effects on public health and to set "generally applicable environmental standards" outside the boundaries of nuclear facilities.

Public Health Service Act— requires EPA to provide assistance to the States and to monitor the environment for radiological effects. There are approximately 980 monitoring stations throughout the country.Samples of air,air particulates, drinking water, rainfall, surface water, milk, and human and animal tissues are monitoried for radioactivity levels.

The Ocean Dumping Act of 1972— requires EPA to regulate the disposal of radioactive waste in the ocean.

The Safe Drinking Water Act of 1974 — requires EPA to establish radiation criteria for potable water.

The Federal Water Pollution Control Act of 1972 — requires EPA to assess the best practical available technology for protecting water quality and to establish effluent and water quality limits for radiation discharges.

The Clean Air Act Amendments of [illegible]70 — requires EPA to assess the best practical technology for protecting air quality and to establish ambient and emissions standards for radiation discharges.

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dialog:

environmentalists look at urban problems

Can the environmental movement save our cities? That question was asked of the hundreds of people who attended two "Urban Environment" conferences in April. These are the first step to forming a coalition of the civil rights activism of the '60s and the environmental fervor of the '70s to bring diverse people and groups together to create a healthier urban environment.

In early April, over 800 people came from around the nation to attend "City Care" — a conference sponsored by the National Urban League, Sierra Club, and Urban Environment Conference and Foundation. Six Federal agencies, including EPA, provided grants for the conference.

The idea of the conference was to forge an environmentalist-urban activist alliance to work together to improve the city environment. Workshops merged interests of the two groups. Protection of the natural environment and the rescue of the urban environment were topics of discussion.

Vernon Jordan, speaking in Detroit, said "we must focus our attention on our most endangered environments — our cities. A caring alliance which goes beyond government, civil rights, and the environmental movement" is essential.

EPA Deputy Administrator Barbara Blum called attention to the toxic hazards in our urban environments. The concern for healthy environments is a concern that focuses on air, water, and land — whether on the farm or in the city.

Blum also announced a new urban initiative — an effort to re-focus the clean lakes program on the needs of inner city residents.

"EPA is doing this because we believe they — like their suburban neighbors — deserve access to usable

Milton Regier/Chicago Lung Association

Top: Participating agencies display materials at City Care in Chicago. Below: Joanne Alter (left), Chicago Sanitary District commissioner, in a group discussion with Jack Shaeffer (center), president of Shaeffer and Roland environmental engineering, and Bill Westfall of the Sierra Club.

Milton Regier/Chicago Lung Association

EPA Deputy Administrator Barbara Blum
Rep. Woods Bowman
Dr. Samuel Epstein

recreation areas," Blum said. "For the urban poor, these lakes are often the only recreational areas within reach," Blum said.

In addition to EPA's focus on urban lakes, concern was expressed for the full funding and implementation of the Department of Interior's Urban Park Recreation and Recovery Program.

Ramon Rueda, of the People's Development Corporation, is working in New York's South Bronx to promote urban gardening, composting, and recycling.

Rueda said, "If you're curbing the flow of garbage or sludge into the ecology of a region, as some of our projects do, that certainly addresses the Sierra Club's agenda. And it also addresses the inner-city agenda by training local residents in how to clean up their own environment, and create jobs as well."

Rueda also introduced a resolution asking the Federal government to "heed the lesson of Three Mile Island by ceasing its support of the nuclear industry and reallocating its energy commitment and resources to solar development and other environmentally benign technologies." That resolution was overwhelmingly approved by the conference.

Michigan's Governor William Milliken told the conference that the era of limits, which the nation is entering, requires abandoning American's traditional throwaway ethic — the careless discarding of containers, land, toxic wastes, and vital resources.

Discussion took place on how to promote mass transportation, and stop surburban sprawl that harms the cities. Participants talked of housing rehabilitation, recycling and other technologies that could also provide jobs for the unskilled or semi-skilled.

On April 28, a one-day follow-up was held in Chicago at the Lung Association, to update Chicago area people on many of the topics discussed at the Detroit conference and to discuss a plan of action for future coalitions. Over 100 people attended the meeting to discuss common concerns — such as energy, transportation, air pollution, jobs and health, urban forestry, water disposal, land use and planning.

> *". . . the era of limits, which the nation is entering, requires abandoning American's traditional throwaway ethic . . ."*

Politics and pollution was a main theme, as well as specific community improvements that are working in the Chicago area. Conference participants were asked to consider the fundamental protection of our water, air and work place, and to ask what needs to be done by citizens. How can we mobilize citizen resources and what steps must we take? The keynote speaker, Dr. Samuel Epstein, professor of occupational medicine at the University of Illinois School of Public Health, called for the "development of loose ad hoc coalitions which embrace a wide range of interests and which can explore a wide range of political options to address the issue."

Will the 1980's see the development of a coalition of interests to improve and protect our urban environments? American communities show signs of both rebirth and decline. We conquered the wilderness to build our nation, and still share deep concerns about preserving our wilderness/natural areas.

It is also in our national interest to preserve and strengthen our cities and make them more healthy and hopeful places in which to live and work. The April City Care conference began the urban coalition-building; we must continue to listen to the common concerns of environmentalists and urbanists and take action to protect our most endangered environment — the city.

By Sara Segal, Region V's State Coordinator for Wisconsin, in the Regional Administrator's Office.

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LAKE ALICE :

a wonderland of discovery

Not all government contracts are with giant firms for millions of dollars.

The EPA recently contracted with the Lincoln School fourth grade class in Fergus Falls, Minnesota to study nearby Lake Alice and make a general report on the conditions of the lake.

Materials and equipment needed for the project were purchased with funds made available through a "mini-grant" from the Minnesota Pollution Control Agency and EPA.

Information gathered by the students was used by the Minnesota State government to meet water quality analysis requirements set forth by Section 208 of the Clean Water Act.

The study was directed by David Ellis, the fourth graders' teacher and instigator of the project.

The class began work in October, 1978 and submitted its final report January 30, 1979.

"The Lake Alice project had four objectives," said Ellis. "The first was to measure the clarity and basic quality of the water. The second was to clean up the lake's shoreline while seeking to identify point source pollution. The third objective was to identify non-point source pollution and the fourth was to report to the community on our findings."

A major aspect of the lake study centered on Secchi disk tests. The Secchi disks (named for a 19th century Italian astronomer) were used to measure the lake's turbidity, or water cloudiness. The disk is divided into quarters which are alternately painted black and white. It is then weighted, attached to a cord and lowered into the water. When the disk is lowered to a point where it is no longer visible, the length of the cord is noted, indicating the depth of visibility.

One unexpected finding was that Lake Alice was much more shallow than many residents thought.

The students found that Lake Alice was very turbid, visible only to depth of eight inches when measured on October 18. The visibility did improve progressively to a depth of 19½ inches on December 8.

This turbidity was attributed to non-point source problems — large numbers of water fowl inhabiting the lake, and a point source — a storm sewer discharge at the north end of the lake.

The reports to the community on the students' findings were made through the local paper, The Fergus Falls Daily Journal, and, after the study was complete, through interviews with area residents, during which copies of the final report were given out.

Although many of those interviewed speculated that the lake might be as deep as 100 feet, the students discovered, during the Secchi experiments, that the waters were consistently not more than six feet deep.

There was also no evidence discovered to lend any credence to the popular myth that whole buildings were hurled into Lake Alice by the tornado that struck Fergus Falls in 1919.

"This study was a very rewarding experience for the Lincoln fourth grade and their teacher," said Ellis. "Not only were some of Lake Alice's mysteries learned, but the students discovered new things and applied old knowledge in an interesting, practical way."

EPA and MPCA certainly got their money's worth; the study, all equipment and supplies, and the final report cost $234.

by W.W. Reid

Explanation of Variance in Grant Objectives:

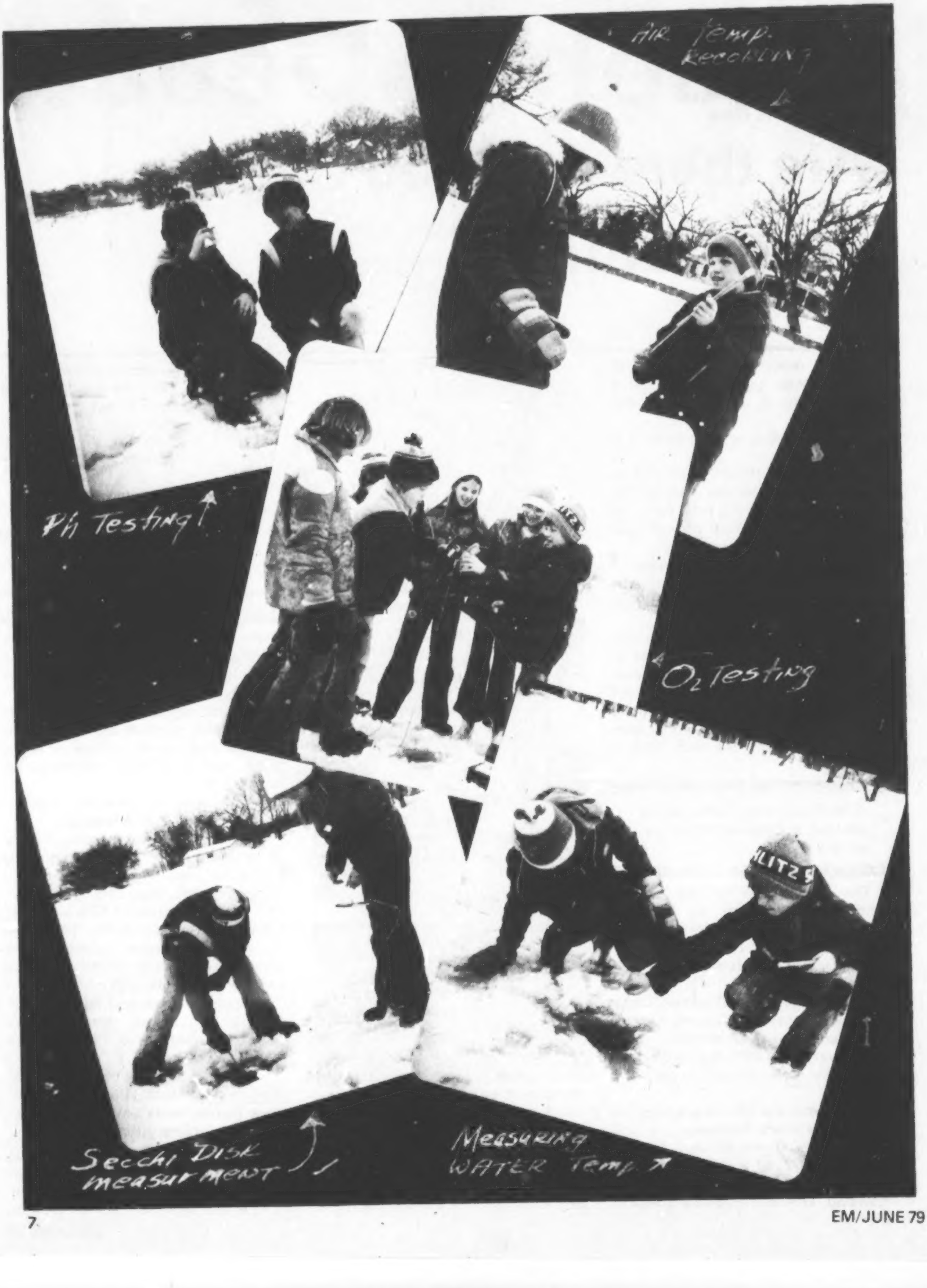
1. **Due to late confirmation of the grant's approval, the study was not begun until October, 1978.**
2. **Because the project was started then, it was not practical to work with other students or staff. Therefore, I used my class and supervised the project myself.**
3. **A large quantity of premade Secchi Disks were not available as I attempted to begin project. Therefore, it was necessary (and more practical) for the students to construct their own disks. This greatly reduced the cost, as the disks were made from old paint can covers. The expense for disks was projected at $125.00. By making our own, they cost $14.05.**
4. **Due to Point 3 a great deal of money was still available. Because of this, and a desire to more thoroughly test the water of the lake, the Oxygen Kit (1) at $53.00, and pH Kit (1) at $29.00, and Phosphate Test Kit (11) at $74.25 total were ordered from the Hach Chemical Company.**

Total for equipment:	**$156.25**	**Water Analysis**
	14.05	**Secchi Disks**
	$170.30	

5. **Because no other staff was utilized, the money allotted Staff (myself in this case) was reduced to purchase the equipment**

Total Staff hours	**10½ at $6.00/hr.**	**$63.70**
	Total	**$234.00**

Dave Ellis, Lincoln Elementary School, 511 N. Union, Fergus Falls, Minnesota 56537



Ph Testing ↑

Air Temp. Recording

O$_2$ Testing

Secchi Disk measurment

Measuring WATER Temp. ↗

Gasohol Debate

Are there corn-fed Cadillacs in our future?

They're doing it out of curiosity. They're doing it for better mileage. They're doing it to help the energy crisis.

They're all filling up their tanks with gasohol.

Gasohol is a mixture of 90 percent gasoline and 10 percent alcohol. The alcohol is usually made from corn, but can also be made from organic solid waste or agriculture by-products.

A lot of people in the Midwest are talking about it, and a lot of people are using it. It's being sold at about 500 gas stations around the Region.

At the first gas station in the Chicago area to sell gasohol, the attendant hasn't sat down on the job in days. On a normal Saturday, they sell 2,000 gallons of unleaded gas. On the first Saturday they sold gasohol, they sold 8,000 gallons. At 95.9 cents a gallon.

> *A lot of people are talking about gasohol, and a lot of people are using it.*

The waiting line for the gasohol pump stretched way out into the street. There were curiosity seekers, corn futures investors, and enthusiastic return customers, waiting to fill up again.

"I'm getting about 20 percent better mileage with gasohol. And my car runs better too," said one customer.

"My car runs a lot better on gasohol. It has a lot more get up and go," said another.

The flexibility of EPA regulations has allowed gasohol to flourish.

Under the Clean Air Act Amendments of 1977, all fuel additives were banned as of September 15, 1978. However, EPA was given the power to waive that ban. Gasohol manufacturers applied for a waiver. Because there was no available emissions data at the time, and because of the oil-saving potential of gasohol, EPA Administrator Douglas Costle decided to take no action. This allowed the waiver request to automatically take effect.

Art Baden/EPA

Since then, EPA has also decided to allow gas stations to sell gasohol instead of unleaded fuel, if they don't have the capacity for all three products. This has allowed more small stations to sell gasohol.

EPA has done some tests of gasohol's performance. There are no problems with running any kind of car on gasohol, although EPA tests showed that older cars run better on it than new ones. EPA also found that nitrogen oxides emissions were slightly increased with gasohol, but that hydrocarbons and carbon monoxide emissions were decreased compared to regular gas.

> *"Gasohol has a lot of potential... But more study needs to be done."*

A very slight decrease in fuel economy was found in EPA testing.

"As far as I know, the only reports of better mileage are coming from customers' reporting, and those measurements are not very accurate," said Dick Lawrence of EPA's Mobile Source lab in Ann Arbor, Michigan. As with all mileage estimates, the actual mileage each driver gets may vary from EPA estimates.

"It looks like gasohol has a lot of potential if they can get the costs down. But more study needs to be done," Lawrence said.

A lot more study is being done, all over the Midwest. Universities and State governments are becoming active in researching gasohol issues.

"There are many uncertainties about gasohol," agreed Dick Stout of the Agricultural Engineering Department at Michigan State University. "One of

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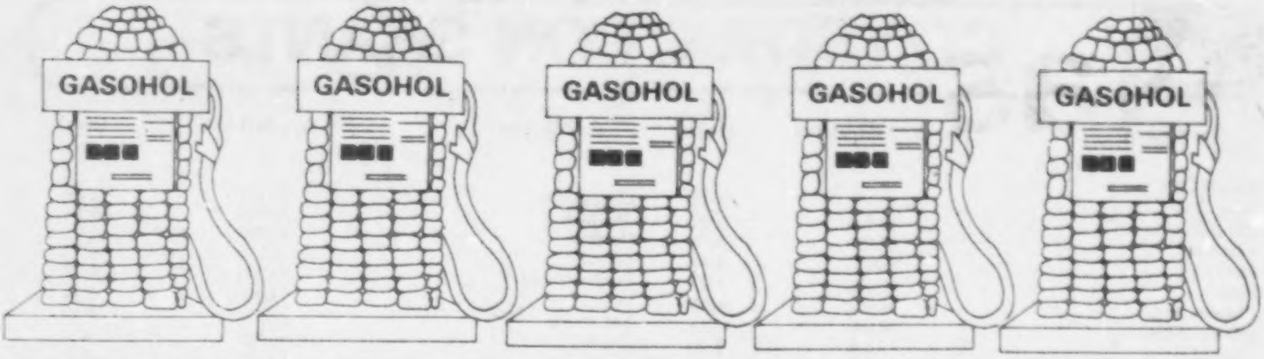


them is cost. Right now, alcohol is so much more expensive than gasoline. The other is energetics. It takes one-third more energy to make gasohol than you get by burning it."

"It's going to take some time to look into these things. We need commercial-sized demonstrations to see what the actual economics will be. We just won't know until we try it," Stout said.

Such a demonstration project appears to be underway in north-western Minnesota's Red River Valley. Four local farmers have formed Agri-Energy, Inc., and plan to build a $100 million industrial complex to produce alcohol for gasohol. The plant will be the first of its kind in the world — employing over a hundred people, it will be virtually pollution-free, will solve many of the area's agricultural waste problems, and will use little or no fossil fuel.

The plant will produce 20 million gallons of 200-proof ethanol a year to be sold to gasohol distributors. That would make it the largest alcohol (for gasohol) producer in the country.

The raw materials they'll use are agricultural waste products generated in the area. The alcohol will be made from potato, molasses, and grain waste products that are now disposed of, or sold on the low-grade market for as little as 5 cents per pound.

The new plant will produce twice as much energy as it consumes... because of an ingenious recycling system.

The plant will produce twice as much energy as it consumes, according to an engineering study. This is because of the ingenious recycling system the plant will use. The waste from the manufacturing plants will be used to feed cattle kept nearby, or to fire the boiler in the manufacturing plant. Non-recyclable paper, that can be bought for transportation costs, will also be used as fuel.

Art Baden/EPA

If everything goes as planned, this facility will answer a lot of the questions now being raised about gasohol production. The plant's construction is set to begin this summer.

Congress has also taken action to look further into the possibilities of gasohol.

A 19-member National Alcohol Fuels Commission has been established and will issue a comprehensive report, with recommendations to Congress in one year.

The General Accounting Office (GAO) is beginning work on a report on alcohol fuels, including gasohol. GAO is looking at production economics, and commercial strategies. The report will be released this fall.

Gasohol has . . . Congressional involvement, strong farm group support, and even an endorsement from President Carter.

An amendment to the Energy Tax Act exempts alcohol fuels from the 4-cent-a-gallon Federal gas tax. Gasohol has also been exempted from State taxes in Iowa, Nebraska, and South Dakota. Illinois is also considering such a measure.

Things are looking good for the future of gasohol. It has Congressional involvement, strong farm group support, satisfied customers, EPA's approval, and even an endorsement from President Carter. But its strongest point is that it could cut $4 billion from the nation's oil-import bill. And that could be good news on the energy front, for a change.

by Nancy McKinney

CONSTRUCTION GRANTS

Applicant	Award Amount	Date
ILLINOIS		
Metropolis	$ 17,100	4/12
Camp Point	19,725	4/23
Kewanee	82,725	4/29
Pana City	53,475	4/27
Lena	6,150	4/27
Buffalo Grove	68,850	4/16
Morton Grove	66,075	4/23
Bement	17,625	4/20
Knoxville	13,125	4/19
Elmhurst	292,725	4/23
Farina	15,750	4/23
Sandoval	16,500	4/16
Rockton	18,225	4/23
Highland	54,425	4/23
Effingham	517,125	4/12
Streamwood	11,700	4/16
INDIANA		
Dyer	13,200	4/10
Fountain	9,000	4/12
Cynthiana	13,575	4/23
Jackson County	43,500	4/12
Richmond Sanitary District	90,650	4/12
Trafalgar	114,225	4/12
MICHIGAN		
Michigan Department of Natural Resources	7,084,300	4/2
Genesee County	3,150	4/26
Saline	82,875	4/17
Genesee County	23,700	4/4
Monroe County	23,100	4/18
Imlay	2,850	4/19
Hudson	96,450	4/10
Hart	29,250	4/19
Potterville	2,775	4/10
Southeast Livingston	41,550	4/27
Dansville	18,750	4/6
Baraga	13,575	4/23
Stephenson	11,400	4/12
Peninsula Township	17,205	4/26
Negaunee	42,075	4/20
Genesee	27,375	4/12
Potterville	6,225	4/12
Otsego	10,500	4/12
Detroit	883,950	4/24
Burton	102,075	4/16
Detroit	301,050	4/24
Oakland County	73,500	4/12
Detour	870,570	4/20
Fife Lake Utility Authority	12,600	4/6
Detroit	15,814,125	4/10
MINNESOTA		
West Concord	$ 1,650	4/17
Red Lake Falls	28,425	4/13
Vesta	15,750	4/9
Staples	44,250	4/23
Hector	22,725	4/20
Remer	13,500	4/5
Trommald	11,325	4/5
Milaca	35,400	4/26
Lake Henry	8,250	4/23
Green Isle	16,425	4/13
Sleepy Eye	42,225	4/26
Applicant	**Amount**	**Date**
Long Prairie	24,975	4/23
Starbuck	26,475	4/18
Onamia	22,200	4/5
Carlos	7,650	4/11
Browns Valley	54,075	4/13
Cook	14,400	4/23
Sandstone	29,250	4/16
Jasper	14,625	4/5
Orr	13,200	4/5
Lake Park	16,725	4/5
Evansville	21,600	4/13
Murdock	14,850	4/5
Kenneth	10,725	4/5
Holland	10,875	4/23
Plainview	47,775	4/23
Nashwauk	13,875	4/26
Lacrescent	750	4/18
Albertville	1,875	4/10
Stewartville	19,650	4/10
Aurora	65,025	4/6
Metro Waste Council	38,400	4/20
OHIO		
Ohio Water Development Authority	$ 134,775	4/10
Defiance	77,850	4/10
Syracuse-Racine Sewer District	24,675	4/20
Cleveland	817,350	4/19
Warren	177,525	4/20
Tuscarawas County	456,975	4/18
Cleveland Sewer District	8,379,900	4/12
Defiance County	153,375	4/6
Newcomerstown	1,585,125	4/20
Bellville	50,475	4/20
McClure	9,450	4/26
Hamilton County	667,800	4/6
Village Council	6,150	4/10
Licking County	13,800	4/18
New Madison	2,175	4/27
Fayette County	22,500	4/23
Trumbull County	34,200	4/23
Findlay	188,025	4/20
Fayette County	22,500	4/20
WISCONSIN		
Bloomer	$ 10,460	4/18
Kewaskum	9,072	4/17
Chetek	6,825	4/12
Milton	10,875	4/16
Madison Sanitary District	126,600	4/5
Butte Utility District	10,950	4/26
Milwaukee County Sanitary District	5,498,025	4/16
Cornell	40,800	4/26
Pitsville	26,950	4/9
Fall River	23,325	4/12
Ladysmith	26,550	4/6
Bristol Utility District	47,625	4/12
Bloomer	39,450	4/26
Coleman	22,500	4/19
Crandon	21,687	4/6
Juneau	5,850	4/4
Footville	8,775	4/23
Delafield-Hartland	2,625	4/23
Oostburg	131,475	4/12
Milwaukee Sanitary District	728,025	4/20
Augusta	108,600	4/4
Black Creek	81,000	4/6

update on State-EPA agreements

focusing on local problems and solutions

Each year U.S. EPA awards tens of millions of dollars to State agencies — State EPAs, departments of natural resources, departments of health, and pollution control agencies — to carry out pollution control programs. In fact, the States actually carry out the majority of all environmental protection activities.

For the last several weeks, the six Midwest States and Region V EPA have been working on the initial phase of State-EPA agreements. These agreements are a planning technique for ensuring State and Federal cooperation in pollution control programs and they will be an integral part of program planning for the 1980 fiscal year (October, 1979 through September, 1980) programs in each State.

According to John McGuire, Regional Administrator, the agreements "will allow us to strengthen our partnership with the States in attacking environmental problems."

The first step was for the States and EPA to identify what they considered to be the most important procedural and environmental problems they face. Some of these problems were selected to be "highlighted" for special attention in the 1980 fiscal year. They include:

- Developing a process to deal with the waste products of pollution control, such as sludge from sewage treatment works or from scrubbers used to remove sulfur from coal.
- Developing an effective hazardous waste program.
- Completing the State Implementation Plans for air quality.
- Coordinating groundwater protection with Safe Drinking Water Act activities.
- Clarifying State and EPA roles and responsibilities.
- Establishing public participation strategies and requirements.
- Developing a State pretreatment program for industrial discharges into municipal sewers.
- Completing waste load allocations for sewage treatment plants. (These allocations are used to plan community growth.)
- Addressing ways to mitigate problems caused by different funding schedules and finding ways to expedite processing of program grants.

In addition to these highlights, several issues were found whose solutions allow or require actions and funding from more than one program area. An example of such a "cross-cut" is monitoring of toxic substances in the environment. Activities under the Safe Drinking Water Act, the Clean Water Act, the Clean Air Act, and the Toxic Substances Control Act all contribute to toxic monitoring. By realizing this early in the program planning cycle, managers gain two advantages:

- they can coordinate work under the various grants, and they can accomplish the same for less money, or
- they can divide work and dovetail various activities, so the same money can accomplish more.

In addition to addressing highlighted and cross-cutting issues, the States are now preparing initial work plans for the rest — and the bulk — of their pollution control activities (permit issuance for water and air, construction grant review and processing, enforcement activities, technical assistance, field inspections, etc.)

Problem-solving approaches for tackling the highlighted issues should be developed in the next few weeks. These will then be incorporated into the initial State program plans for next year. These initial plans are due in early July, when public hearings will be scheduled. The plans will then be revised as needed, with EPA approval scheduled for September.

The actual State-EPA agreement document, which will be finalized around September 1, will contain:

A narrative on the environmental problems in the State

- A five-year problem-solving forecast
- A narrative on management issues
- FY 1980 highlighted issues with problem-solving approaches
- Cross-cutting issues
- An appendix containing all State program planning documents
- A schedule to complete the FY 1981 State-EPA agreements

EPA looks to the State-EPA agreement process to start planning from an issue-oriented appproach and as a mechanism of communication on issues affecting State-EPA relationships.

By Dan Banaszek, Region V's State Coordinator for Minnesota in the Regional Administrator's Office.

Seven Lakes Examined in EIS

"Septic Snooper" Plan Will Sa

Many new developments in water pollution research are a boon to cost-cutters. Laser beams, infrared light, airplanes, satellites, and ultraviolet fluorescence are all being used to pinpoint pollution sources.

Two of these new methods, infrared light and ultraviolet fluorescence, were used at Crystal Lake, Michigan, to provide valuable information on the condition and problems existing in the lake. These new innovations may result in a savings of approximately $10.5 million over older methods.

You can see the bottom of Crystal Lake at a depth of 26-28 feet. That makes it about as crystal clear as a bay in the Bahamas.

Except for its outstanding transparency, Crystal Lake resembles many other Midwestern rural lakes. It is a partially wooded natural haven, ringed with cottages ranging from lavish to humble. It is the beauty of this haven that newcomers seek out, and that residents work to preserve.

keeping Crystal Lake clean

More than ten years ago, when localized algae growths appeared along portions of the shoreline, Crystal Lake property owners immediately wanted to take any steps necessary to end this intrusion. At their own expense they funded and worked on a water quality study worth $50,000, and began the process leading to Crystal Lake's application for a Clean Water Act construction grant.

In the recent past, water quality planning was often thought to consist of construction of a centralized sewage treatment system. Such facilities were often planned without regard to the actual cause of any lake pollution , and without adequate information on the actual impact of any proposal. The many miles of pipe can make rural sewering an expensive proposition, especially if it does not produce results.

The original proposal for a Crystal Lake sewage treatment system would have cost almost $18 million. That's a local cost of about $4,000 per dwelling, even after a 75 percent Federal grant for eligible costs, and it does not include private hookup costs of nearly $1000 per dwelling. There might also be no improvement for years, because of the ability of algae to store phosphorous and slow groundwater movement.

Crystal Lake residents now have septic tanks in their back yards. These on-site treatment systems use a retention tank and a soil absorption field to settle out solids and dispose of liquid wastes. Sufficient retention time and good soils in the absorption field can ensure adequate on-site treatment of waste by a well-designed system. Other important factors in the workings of a septic system include groundwater flow direction and distance of the unit from the lake.

Soil conditions and groundwater flow direction vary from portion to portion of the lakeshore. Distances from house to house to lake also vary. It was these varied characteristics that EPA had to consider in its recent Environmental Impact Statement (EIS) on the Crystal Lake project.

The heart of the problem was this: How could we keep Crystal Lake clear at bearable local costs?

An aerial infrared survey (pictured right), showing surface septic tank drainfield failure was performed at a cost of about $2,000. The old, detailed on-site survey method might have cost at least $100 per dwelling — or about $150,000 for Crystal Lake. The fluorescence of septic tank effluent under ultraviolet light was used in the revolutionary "septic snooper" device to track effluent movement through

111

ve Billions of Dollars

Aerial infrared survey of Crystal Lake, showing malfunctioning septic tanks.

seven lakes

groundwater into the lake.

The septic snooper can locate and measure septic tank discharges (called plumes) into the lake, and can do so with plumes that have been inactive for up to six months. This allows survey in the fall or even the winter (through the ice) although seasonal residents may not be present.

the real problem . . .

At Crystal Lake only 90 plumes were found to be reaching the lake. These 90 plumes in turn were contributing only a tiny fraction of the total phosphorous load to the lake (even less than the six percent originally estimated in lake water quality modeling.) The great bulk of the small lake phosphorous load came from precipitation, from agricultural and stormwater runoff, and from a possible leaking sewer main located on a creek feeding into the lake. It is, however ,not the overall phosphorous levels that are a problem, as the high water quality and clarity shows.

The real problem is attached algae growth at certain points around the lakeshore. The septic snooper found that this was taking place at the exact points where the 90 septic tank plumes were reaching the lake. The algae and attached weeds were literally rooted in the soil through which the small concentrations of nutrients were moving into the lake. Once the nutrients reached the lake the concentration was too low to allow algae growth or blooms in the water itself.

With this information in hand, EPA and its consultant, developed a new low-cost approach to sewage treatment for the lake area, an approach costing only about $7.5 million. This includes replacement of two malfunctioning downstream primary plants, with one new plant, upgrading septic tanks on about 8 percent of the lakeshore, and installing alternative on-site systems (notably cluster systems)

Amazingly, public reaction to these money-saving innovations was initially critical.

"A lot of people had pushed hard for years to get sewers in," said Chuck Grant, planner for the Northwest Michigan Regional Planning and Development Commission, Crystal Lake's local water quality planning agency. "But that's because they were told that sewers were the only answer to any problem."

"But I think this study's clearly something that needed to be done. It's an innovative, interesting project," Grant said. "There was a lot of local opposition right at the start, but as public meetings were held, people began to see that they just didn't have to spend $18 million. And that began to look very attractive."

The Crystal Lake project is also part of a special Environmental Impact Statement being prepared by EPA, Region V.

The EIS began in July, 1977 when a pattern was noticed in many of the Water Division's projects. There were hundreds of similar plans of study for sewer facilities construction grant projects.

These projects were all in rural areas, and involving sewering of lakeshores. They had a substantial seasonal population, and were very expensive.

If something wasn't done. Midwesterner's relaxing at their lakeside cottages would be hit with more than a cool breeze off the water. How about a $4,000 sewer assessment bill? In one community, the local cost for some of the residents would be up to two and one-half times the value of the average dwelling. The Region V EIS Section staff developed a plan to deal with this problem.

They chose seven typical projects as the subject for seven thorough investigations of exactly what the water quality problems were, but what dif-

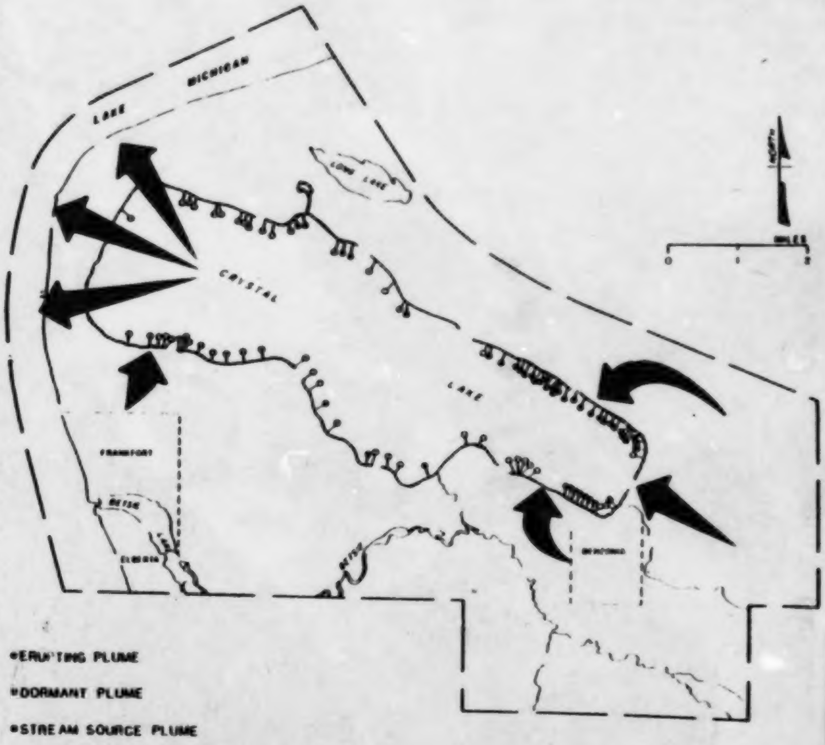


Figure 4. Plume locations on Crystal Lake.

Results of Septic Snooper study (arrows indicate groundwater flow direction).

The water quality problems were studied in detail .

ferent approaches could be used to deal with them.

The seven projects studied were Crystal Lake and Crooked/Pickerel Lakes, Michigan; Green and Otter Tail Lakes, Minnesota; the eleven Steuben Lakes, Indiana; Nettle Lake, Ohio; and the eight Salem Township Lakes, Wisconsin. These projects include thirty-five different lakes at different stages of shoreline development and water quality conditions.

rather fix than switch

On the six other lakes, results were comparable to Crystal Lake. Research pointed out in one case that out of 1500 septic tanks in the project area, only 90 reached the lake at all, and only two significantly polluted. It is clearly preferable to fix those two, and perform preventative maintenance on the rest, than to abolish 1500 systems and build a new central facility.

Other low-cost approaches used in the alternative plans include small-diameter gravity sewers, composting toilets, mound systems, flow-reduction, and water conservation devices.

A cluster system is another economical approach to a community's water pollution problems. These systems will be used on part of Crystal Lake. A cluster is a multi-family (usually about 25) soil absorption field located on good soil for better treatment of septic tank wastes. A pressure sewer picks up sewage from septic tanks and carries it to a good soil area.

Flow reduction can also increase septic tank efficiency because it increases the tank retention time, resulting in better settling, and less chance for seepage of pollutants. Reduced flow can also ensure that septic tank operations take advantage of special groundwater conditions where flows are away from the lake.

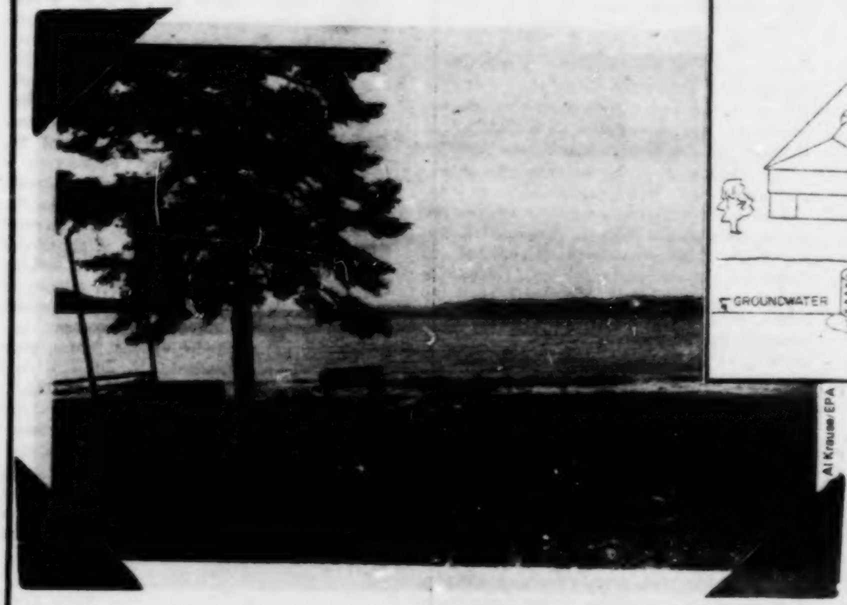
The new designs for the seven communities, tailored to the communities' actual needs, have shown outstanding cost saving results. Overall costs have been reduced 30-60 percent, and local costs 50-80 percent. So far, $30 million will be saved on the seven demonstration projects alone.

A generic EIS to develop future planning recommendations for similar situations throughout the Region is still being developed as part of this project. The approaches and recommendations of this EIS will be used on hundreds of cases — and could easily save billions of dollars.

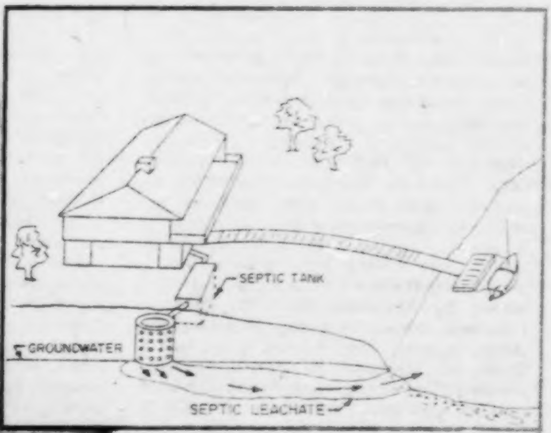
To obtain additional information about Crystal Lake EIS or other projects of the "Seven Lakes" EIS, please contact Gene Wojcik or Al Krause, EIS Section, Environmental Engineering Branch, EPA Region V, 230 South Dearborn , Chicago, IL 60604. (312) 353-2157.

To obtain further information about the "septic snooper," please write Dr. William B. Kerfoot, K-V Associates, 49 Ransom Road, Falmouth, Massachusetts 02540.

By Nancy McKinney, Editor of **Environment Midwest**, *and Al Krause, an Environmental Protection Specialist in EPA Region V's Facilities Planning Branch, Water Division, Krause is assigned as Project Officer on the Seven Lakes EIS Project.*



Al Krause/EPA



Malfunctioning or overloaded septic systems on porous soils may leak poorly-treated effluent into the groundwater, and eventually pollute the shoreline of nearby lakes.

FEDERAL REGISTER

April 5, 1979 — Proposed Rules: Water pollution; effluent guidelines for certain point source categories: Seafood processing, canned and preserved. **April 6, 1979 — Proposed Rules:** Air programs: Regional consistency regulations; hearing Air quality implementation plans; delayed compliance orders: Ohio. **Notices:** Air programs; fuels and fuel additives: Gasohol; waivers: Environmental statements; availability, etc.: Agency statements, weekly receipts. Meetings: Administrator's Toxic Substances Advisory Committee. FIFRA Scientific Advisory Panel. Pesticide registration, cancellation, etc.: Promalin. Pesticide use and production by veterinarians; policy statement and inquiry; correction. Pesticides; emergency exemption applications: Benomyl (2 documents). DDT Ferriamicide. Metribuzin. Water pollution control: Safe drinking water; review of variances and exemptions. **April 9, 1979 — Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: New Mexico. **Proposed Rules:** Air quality control regions; criteria and control techniques: Attainment status designations. Air quality implementation plans; delayed compliance orders: Georgia. **Notices:** Pesticide ; registration, cancellation, etc.: Chlorobenzilate; hearing. Pesticides; tolerances, registration, etc.: Triforine. **April 10, 1979 — Rules:** Air quality control regions; critera and control techniques: Attainment status designations. **Proposed Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: Nevada (4 documents). Air quality implementation plans; delayed compliance orders: Florida. **April 11, 1979 — Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: Arkansas. Texas. Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions; etc.: Chlorotoluene. **Proposed Rules:** Air quality implementation plans; delayed compliance orders: Kentucky. **Notices:** Air pollutants; radioactive; scientific information review; inquiry. Air pollution; standards of performance for existing sources: Primary aluminum reduction plants; guideline availability. Pesticide registration, cancellation, etc.: Velsicol Chemical Corp. Pesticides, emergency exemption applications: Nosema Locustae. Pesticides, experimental use permit applications: Permethrin (3 documents). Uniroyal Chemical. Water pollution control: Safe drinking water; underground injection control program; State list: petition for inclusion by Maryland. **April 12, 1979 — Proposed Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: Mississippi. **Notices:** Air pollution; ambient air monitoring reference and equivalent methods applications, etc.: Thermo Electron 43 Pulsed Flourescent SO^3 Analyzer. Pesticides, emergency exemption applications: Benomyl. Pesticides; temporary tolerances: Oxyfluorfen. Pesticides; tolerances in animal feeds and human food: ICI Americas, Inc. **April 13, 1979 - Rules:** Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: Oxamyl. Water pollution; effluent guidelines for certain point source categories: Oil and gas extraction. **Proposed Rules:** Air pollution control; new motor vehicles and engines: Heavy-duty engines; gaseous emission standards; 1983 and later MYs; hearing. Air quality implementation plans; approval and promulgation; various States, etc.: South Dakota. Wyoming. Air quality implementation plans; delayed compliance orders: North Carolina (3 documents). **Notices:** Air programs; fuel and fuel additives: Sun Petroleum Products Co. waiver application. Environmental statements; availability, etc.: Agency statements, weekly receipts. Grants, State and local assistance: Noise assistance projects. Pesticides, experimental use permit applications: Bifenox. Chlorpyrifos, etc. 1-(2-(2,4-dichlorophenyl)-2-(2-propenyloxy)ethyl)-1H-imiadazole, etc. Pesticides, temporary tolerances: 3-(3',5'-Dichlorophenyl)-5-ethenyl-5-methyl-2,4-oxazolidinedione. Pesticides; tolerances in animal feeds and human food: Amchem Products, Inc., et al. **April 16, 1979 — Rules:** Air quality implementation plans; delayed compliance orders: Ohio (3 documents). Water pollution; effluent guidelines for certain point source categories: Canned and preserved fruits; pickle salting stations. **Proposed Rules:** Air quality implementation plans; delayed compliance orders: Wyoming (2 documents). **Notices:** Air pollution control, new motor vehicles and engines: Diesel engine technology: 1981 NOx emission standard; waiver application. Meetings: Science Advisory Board, Mobile Sources Subcommittee; cancellation. Pesticides, temporary tolerances: Methyl 2-chloro-9-hydroxyfluorene-9-carboxylate et al. **April 17, 1979 — Proposed Rules:** Air programs; assessment and collection of noncompliance penalties; correction. Noise abatement programs: Transportation equipment; interstate rail carriers. Pesticides; tolerances in food: Propargite. **Notices:** Hearings: California State Motor Vehicle Pollution Control Standards. 2,4,5-T and Silvex; suspension of registration of certain uses. Pesticides, experimental use permit applications: American Cyanamid Co. Diamond Shamrock Corp. Pesticides; temporary tolerances: 1-(2-(2,4-Dichlorophenyl)-2-(2-propenyloxy) ethyl)-1*H*-imidazole. *N*-(1-Ethylpropyl)-3,4-dimethyl-2,6-dinitrobenzeneamine. **April 18, 1979 — Rules:** Water pollution; effluent guidelines for certain point source categories: Coal mining; catastrophic precipitation exemption; correction. **Proposed Rules:** Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: Methyl 3-((dimethoxyphosphinyl)oxy)butenoate. **April 19, 1979 — Rules:** Air pollution; standards of performance for new stationary sources: Washington; authority delegation. Pesticides; tolerances in foods: Aldicarb. **Proposed Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: District of Columbia. Maryland. Virginia. Pesticide chemicals in or on raw agriculatural commodities; tolerances and exemptions, etc.: *O,O*-dimethyl *S*-((4-oxo-1,2,3-benzotariazin-3(4*H*)-ylmethyl)phosphorodithioate. **Notices:** Meetings: Environmental Pollutant Movement and Transformation Committee. Organization, functions, and authority delegations: New source permit contacts, requests for new construction; regional office list. Pesticide applicator certification and interim certification; State plans: Massachusetts. Pesticide registration applications; cancellation. Pesticides, experimental use permit applications: American Cyanamid Co. et al. Pesticides; temporary tolerances: Aldicarb. 1-Methylethyl 2-((ethoxy((1-methylethyl)amino)phosphinothioyl)oxy)benzoate. Toxic substances control) receipt of premanufacture notices. **April 20, 1979 — Proposed Rules:** Air pollution control, new motor vehicles and engines: Emission control system performance; warranty regulations. Air quality control regions; criteria and control techniques, etc.: California; redesignations. Air quality implementation plans; approval and promulgation; various States, etc.: Vermont; correction. Water pollution control: State underground injection control programs. **Notices:** Environmental statements; availability, etc.: Agency statements, weekly receipts. Grants, State and local assistance: Underground water source protection programs; class deviation. Hearing: California State Motor Vehicle Pollution Control Standards. Pesticides; registration, cancellation, etc.: Dibromochloropropane (DBCP); hearing. Water pollution: Toxic substances; water quality criteria; inquiry, extension of time. Water pollution; discharge of pollutants; Minnesota. **April 23, 1979 — Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: Hawaii. Pennsylvania. Air quality implementation plans; delayed compliance orders: Alabama (2 documents). North Carolina (4 documents). South Carolina. Tennessee. **Proposed Rules:** Air quality control regions; criteria and control techniques: Attainment status designations; Maryland Pesticides chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: Malathion. Methomyl. **Notices:** Meetings: Drinking Water National Advisory Council. FIFRA Scientific Advisory panel. Pesticides; experimental use permit applications: Rohm and Haas Co., et al. Pesticides; registration, cancellation, etc.: Pydrin Insecticide 2.4 Emulsifiable Concentrate Pesticides; tolerances in animal feeds and human food: Sandoz, Inc. **April 24, 1979 — Notices:** Bioresearch studies, toxicological testing laboratories and pesticide toxicity test reports; memorandum of agreement with FDA; cross reference. Meetings: Science Advisory Board. **April 25, 1979 — Rules:** Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: Permethrin. **Proposed Rules:** Air quality implementation plans; preparation, adoption, and submittal: Tall stacks; hearing. **Notices:** Pesticides; emergency exemption applications: Isopropyl carbanilate; amendment. **April 26, 1979 — Rules:** Energy programs: Fuel economy retrofit devices; test procedures and evaluation criteria; correction. **April 27, 1979 — Rules:** Air quality control regions, criteria, and control techniques: Attainment status designations; Florida and North Carolina. Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: Methomyl. **Proposed Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: Nevada (2 documents). Air quality implementation plans ; delayed compliance orders: Alabama. Virginia. **Notices:** Environmental statements; availability, etc.: Agency statements; weekly receipts. Grants, State and local assistance: Water treatment works construction; class deviation. Meetings: Interagency Regulatory Liaison Group. Pesticides; emergency exemption applications: Triforine. Pesticides; experimental use permit applications: Nystatin. Tricyclozole.

Some Solid Advice

Ask a mayor or county executive what his biggest headache is, and he's likely to say, "Garbage!" Americans throw away lots of it. In 1976, solid wastes from residential and commercial sources were estimated by EPA at 130 million metric tons, enough to fill the New Orleans Superdome from floor to ceiling twice a day for a year, weekends and holidays included. This figure gets larger each year, and is expected to reach 180 million metric tons by next year.

What to do with it all is a major problem, complicated by many technical, economic, and political issues. Oftentimes, it is beyond the resources of a community to deal with the problem effectively.

It was with this in mind that Congress authorized a Technical Assistance (TA) program as part of the Resource Conservation and Recovery Act of 1976 (RCRA). This program provides Federal agencies, States, and local governments with technical assistance to deal with solid and hazardous waste management problems.

This program exemplifies EPA's commitment to sound solid waste management practices. RCRA has cleaned up the way communities handle their refuse. Garbage dumps and open burning are becoming things of the past, but their demise means that new ways to handle garbage must be found.

ERA can provide assistance for all types of solid and hazardous waste problems.

Discarded, old tires laying around the countryside might not seem to be a complicated problem. However, in La Crosse County, Wisconsin, tires are linked to a severe public health problem. The shallow stagnant water that collects in old tires is an ideal breeding ground for encephalitis-carrying mosquitoes. Encephalitis causes inflamation of the brain, creating pressure that can lead to death. More than 50 cases are reported each year in La Crosse County. According to the Center for Disease Control in Atlanta, the disease occurs more frequently in children under 15, although medical science doesn't know why children are more susceptible.

Because children like to play around them, the tires are an especially serious problem. Removing them would not guarantee the end of the encephalitis problem in La Crosse County, but would certainly alleviate it.

Collecting thousands of tires is no simple task. And once you do, what do you do with them? Tires are not easy to dispose of. Because you can't compact them, they take up a great deal of space in a landfill. Once in the ground, they tend to rise to the surface. Recycling the rubber is another option, but finding buyers for it is difficult. Shredding the tires, and then burying them or recyling is also possible. However, tire shredders can cost up to $100,000.

La Crosse County, faced with a complex problem, turned to the U.S. EPA Technical Assistance Program for help. EPA set up a meeting in La Crosse with the County Board of Supervisors, bringing in two experts on tire disposal technology— Haynes Goddard, a professor at the University of Cincinnati, and Jim Hudson, a consultant from Boston.

Gail Brownell, the EPA team leader, said, "It was the first time that all the involved parties got together to figure out what could be done. Dr. Goddard helped the County Board understand the economics involved, and Jim Hudson explained the different techniques for tire disposal. Now the Board has a better idea of what the problems are, and what their options are.

TA is helping other communities as well. Minnesota Pollution Control Agency has asked for help in finding solutions for surface and groundwater contamination at four hazardous waste sites in the State. A consulting firm, under EPA contract, will investigate and recommend some alternative solutions.

EPA and regional consultants are also helping Cleveland Heights, Ohio start up a curb-side newspaper pickup program. Residents will separate newsprint out from the rest of their household refuse and place it at the curb-side for collection. The problem is that the sanitation trucks in Cleveland Heights are not designed to handle newspapers. EPA's regional consultant is working with the community to determine the feasibility of newsprint racks on the trucks, trailers, and other options. Other problems are the logistics of apartment house collection, financing, and determining the actual volume of newsprint to be collected.

EPA is providing information and assistance to these communities and others that are working to solve their solid waste problems. For a community to be eligible, EPA must determine that there is a real need, and that technical assistance would be a substantial help to the community.

One method EPA uses is a new program called Peer Matching. This program allows public officials to meet with others from across the country who have successfully handled the same problems.

EPA's own specialists, supplemented by a private consulting firm, are also available to provide technical, marketing, and financial expertise.

Any State, county or other local governmental agency may apply for assistance. For further information contact:

Mr. David Kee, Director
Air and Hazardous Materials Division
U.S. EPA Region V
230 S. Dearborn
Chicago, IL 60604

By Art Baden, the Public Information Specialist in Region V's Solid Waste Management Branch.

News...News...News...News...Around The Region

Illinois

- The Illinois Supreme Court has ruled that the Illinois EPA cannot issue landfill permits contrary to local zoning ordinances. The case involved a dispute in Richton Park, which was zoned for single-family residences by the County. A contractor who wanted to operate a landfill there claimed that the local zoning law was pre-empted by the State Environmental Protection Act.

- Scott has also filed suit against Illinois EPA to close a hazardous waste disposal site in an unincorporated area near Hanover Park, a Chicago suburb. The Illinois EPA issued a supplemental permit to allow the disposal of liquid wastes, and Scott says the site is safe for dry refuse only.

Indiana

- Environmental groups support Governor Bowen's recent veto of a controversial bill to revise regs on rural sewage treatment disposal. Thomas Dustin of the Indiana Izaak Walton League said the measure would have resulted in effluent discharges that would endanger the public health. Enactment of the law would have jeopardized the entire state water pollution control permit program.

- The Lake County Fish and Game Preservation Association is preparing to file a lawsuit to clean up improperly stored hazardous chemicals at Mid-Co Corp. in Gary. Under Indiana law and the Federal Clean Air Act, citizens may sue a State agency to fulfill its enforcement responsibilities.

Michigan

- EPA has concluded that there is insufficient information to proceed with the Wayne County Super Sewer. In a position paper distributed March 28, EPA recommended that to abate pollution in the Flat Rock to Brownstown area, new treatment facilities should be designed immediately. By the time the Final Environmental Impact Statement is distributed in July, EPA expects to have planning and design grant applications from the County.

- The State bottle bill has resulted in at least a 4.5 percent reduction in refuse in the State, says a new DNR report. That could result in an annual $15 million savings in reduced pickup and disposal charges. The city of Detroit has reported a 20 percent reduction in waste.

- Hooker Chemical has been sued by the State for improper dumping of chemicals at its Montague plant near Lake Michigan. The suit asks for a court imposed cleanup schedule, and a 50-year monitoring program for the area, to be paid for by Hooker.

- At a legislative subcommittee hearing on a proposal requiring the DNR to burn PBB- contaminated cattle, a DNR expert testified that further study has changed the Agency's opinion of burning as a disposal method. She said it now seems to pose no environmental problems, but estimated that it could take up to $2 million to convert an incinerator for this purpose.

- A Federal grand jury in Detroit has charged the manufacturer of PBB and two of its employees with concealing by trickery and fraud the contamination of animal feed with the chemical in Michigan in 1973. The indictment charges that Velsicol Chemical Corp. initiated the cover-up to lead the FDA to believe the PBB-mixing was the result of an "unavoidable accident," and not the result of their storage and shipping practices.

Ohio

- The Ohio EPA has referred Summit National Services in Portage County to the Attorney General for appropriate action. The industrial waste disposal facility had been ordered in June, 1978 to stop receiving wastes until plans for proper disposal and storage were submitted.

- As expected, an Ohio House subcommittee rejected a State bottle bill requiring a 10-cent deposit on beverage containers. Environmental groups expect to get the 85,000 signatures required to place the proposal on the November Statewide ballot.

- A recent GAO report has estimated that there are no records of where 80 percent of Ohio's hazardous waste is disposed of. A House subcommittee is drafting stiffer regulations for the monitoring and disposal of waste in the State.

- The proposed site for a secure landfill by Browning-Ferris Industries (BFI) in Jackson County has been disapproved by the Ohio EPA because the site did not meet minimum geographical criteria for safety.

News...News...News...News...Around The Region

Wisconsin

- Environmental groups, the State, and Flambeau Mining Company have reached an out-of-court agreement that will delay development of a copper mine near Ladysmith until the requirements of new mining legislation are met. The company will apply for new permits and will prepare a new environmental impact statement.

- A 20-member citizen committee has approved a bill to protect the State's wetlands by providing tax breaks to owners. The bill now goes to the General Assembly's Natural Resources Board.

- Five watersheds have been selected by the DNR to receive up to $840,000 in State money for cleanup of soil and farm runoff. They are the Galena River, Hay River, Elk Creek, Root River, and the lower Manitowoc River. This major financial committment to cleanup of nonpoint source pollution is a State first.

- The Southeast Wisconsin Regional Planning Commission (SEWRPC) has recommended that 18 sewage treatment plants improve phosphorous treatment. SEWRPC estimates that more stringent guidelines would make all but six of the region's 100 largest lakes and 126 of its 1,180 streams fishable and swimmable. To be adopted the plan must be certified by the DNR, Governor Dreyfus, and the U.S. EPA.

- The State Assembly's Committee on Environmental Resources has unanimously supported an auto inspection and maintenance proposal. This would establish mandatory annual auto inspections to check vehicle emission standards for areas that don't meet Federal air quality standards. The bill now goes before the Assembly.

- The Federal Court of Appeals has upheld a lower court decision ordering Milwaukee to stop dumping raw sewage into Lake Michigan, but ruled the city does not have to embark on a multimillion dollar program to upgrade its sewage treatment system. The case was first brought against the city in 1972 by Illinois Attorney General William Scott, and was later joined by the State of Wisconsin.

PEOPLE

J. Edward Roush, EPA Director of the Office of Regional and Intergovernmental Operations (ORIO), plans to retire from Federal service on June 30, 1979. Roush has served since 1977 as the key link between the EPA Administrator and the ten Regional Offices, and between the Administrator and Governors, local governments, and governmental organizations.

Dale L. Wikre has been appointed Acting Director of the Minnesota Pollution Control Agency's Solid Waste Division. Wikre has been with MPCA for nine years and its currently a senior geologist in the Water Quality Division. His new position includes responsibility for MPCA's solid waste permit and enforcement programs, resource recovery planning, and hazardous waste management.

NOV's

- Mid-States Terminals, Inc., Toledo, OH, particulates.
- Shell Oil, Inc., Bedford Park, IL, hydrocarbons.
- Continental Oil Co., Amboy, IL, hydrocarbons.
- Continental Oil Co., East Alton, IL, hydrocarbons.
- Shell Oil Co., Arlington Heights, IL, hydrocarbons.
- Riverside Paper Co., Appleton, WI, hydrocarbons.
- Clark Oil, Blue Island, IL, hydrocarbons.

OFF THE PRESS

Single copies of *Environmental Quality*, the ninth annual report of the White House Council on Environmental Quality are available from EPA Region V, Office of Public Affairs, 230 South Dearborn, Chicago, IL 60604. The 600-page volume reports on trends, facts, and statistics in air and water quality, solid waste, toxics, population, natural resources, energy, economics, and the global environment.

Also available are limited quantities of EPA Journal Reprints on *The Economy and The Environment*, and *Protecting Water*.

Correction

The correct phone number for the Ohio Industrial Waste Information Exchange in Columbus, OH is (614)486-6741. (From page 15 of May issue.)

Environmental news briefs...briefs...briefs.

New Underground Injection Programs to Protect Groundwater

EPA will provide up to $6 million this year to help States set up and enforce programs to insure that the underground injection of liquid wastes and other fluids does not endanger subsurface drinking water. Potentially harmful practices — such as the improper underground disposal of hazardous wastes — would be stopped.

Injection wells are used for the disposal of municipal and industrial wastes, agricultural and urban stormwater runoff, and brines from oil and natural gas production.

EPA's regulations require the States to set up programs to review all underground injection operations and take any remedial action necessary to protect groundwater. Injection wells would be inspected to make sure they are properly constructed and maintained. Safe injection operations would continue, if they complied with permits and rules issued by the State or EPA.

After a State program is set up to meet EPA standards, the State agency will have primary enforcement responsibility for the program.

To set up their programs, Region V States have received the following grants: Illinois $262,500; Indiana $179,600; Michigan $287,300; Minnesota $53,300; Ohio $224,700; Wisconsin $38,700. Illinois, Indiana Michigan, and Ohio have been designated as high priority States because of the number of existing wells they have.

EPA Funds Study on Great Lakes' Levels

The water quality impact of culturally manipulated lake levels on the Great Lakes Ecosystem is being studied by the University of Michigan's Division of Research Development and Administration. The study, which began in 1978, is expected to be completed in July of this year; a report will follow upon completion.

EPA's Great Lakes National Program Office, Region V, is funding 95 percent of the projected total study cost of $55,611. A recent additional grant of $11,454 allows researchers to gather data on lake levels from the discharge of Lake Huron through Lakes Erie and Ontario to the St. Lawrence River, rather than to be restricted to data only on varied water levels of Lake Erie.

Information gathered will be used to assist the U.S.-Canadian International Joint Commission in its support of the 1978 Great Lakes Water Quality Agreement between the two countries.

EPA Sues Ohio Firm for PCB Pollution

Citing an imminent and substantial danger to public health and the environment, the Department of Justice, acting at the request of the U.S. EPA's Midwest office, has filed suit to halt hazardous waste discharges from a Cleveland firm.

The complaint alleges that Laskin Greenhouse and Waste Oil Company is discharging PCBs and other substances into the air, water, and on roads around the plant. PCBs are toxic chemicals that can cause skin lesions, liver damage, reproductive problems, and cancer.

The case is the first such Federal action in the Midwest citing emergency provisions of the Resource Conservation and Recovery Act (RCRA) to protect the public health.

House Panel Approves EPA Pesticide Rules Veto

The House Agricultural Committee has voted to establish congressional procedures for overruling pesticide rulings of the EPA.

Under the provision, approved 22 to 13, both houses would have 90 days after a pesticide rule was issued to veto it. If one house voted to kill the rule, the other would have to overturn that decision to save the rule.

The committee also voted 17 to six to establish a "sunset" provision for EPA's pesticide control powers. The provision would let the agency's authority expire on September 30, 1985, unless Congress reauthorizes the program or extends it.

Both provisions now go before a house vote.

Pontiacs, Chevettes Recalled for Pollution Control

General Motors must modify the pollution control systems on some of its 1979 Chevrolet Chevettes, or stop production of the cars, according to EPA. The Agency also ordered the recalls of 50,000 Chevettes made this year, and 430,000 1973-1978 model Pontiacs.

The EPA action on the Chevette is a result of failures during assembly line emissions tests. The cars were exceeding the carbon monoxide limit by about one-third.

The Pontiacs were discovered to have a poorly brazed joint on a part used to control nitrogen oxides emissions.

Under the Clean Air Act, GM has 45 days to submit a plan for repairing the defects or to seek a hearing on the recall order.

Environmental news briefs...briefs...briefs briefs...

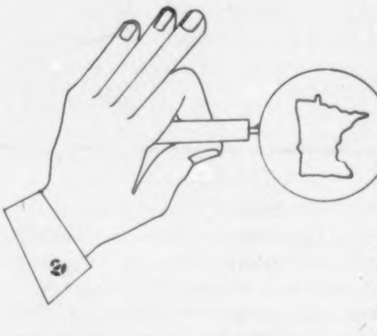
Minnesota Gets EPA Aid for Dump Cleanup

Minnesota Pollution Control Agency (MPCA) has requested technical assistance from EPA to examine options for cleaning up four hazardous waste dumps in the State.

EPA will help to assess the problems, formulate possible solutions, and determine cleanup costs.

The four sites are:

- Perham, where grasshopper pesticide residues buried 30 years ago have contaminated a well with aresenic.
- Duluth, where a waste oil refining operation disposed of sludge residues in an adjacent pond. MPCA said the residues could enter the Duluth water table.
- Anoka County, where inks, solvents, and other wastes may have contaminated soil.
- Winona, where PCB-contaminated oil has seeped into the soil.



Bob Nagel/EPA

Final Regs Banning PCBs Issued

Final regulations banning the manufacture of polychlorinated biphenyls (PCBs) and phasing out most PCB uses have been issued by EPA. PCBs are toxic and persistent chemicals primarily used as insulating fluids in heavy-duty electrical equipment in power plants, industries, and large buildings across the country. The Midwest is one of the largest PCB-use areas in the country.

The action will prohibit the manufacture, processing, distribution in commerce, and "non-enclosed" (open to the environment) uses of PCBs unless specifically authorized or exempted by EPA. "Totally enclosed" uses (contained, and not exposed to the environment) will be allowed to continue for the life of the equipment. The manufacture of new PCB electrical equipment is prohibited.

Although PCBs haven't been produced in this country since 1977, this action is necessary to bring under control the PCBs still in use. This will help prevent further contamination of air, water and food supplies from a toxic and long-lived chemical.

PCBs have caused birth defects and cancer in laboratory animals, and they are a suspected cause of cancer and adverse skin and liver effects in humans.

The regulations will take effect 30 days after publication in the Federal Register.

Emission Controls To Be Covered Under Warranty.

A warranty program that would make car manufacturers liable for repairs to the emission control system of 1980 and later vehicles has been proposed by EPA.

The warranty would cover the cost of repairs to the emission control system of a car that fails an EPA approved auto inspection test, if the vehicle owner has followed manufacturer's recommendations for maintenance.

The new warranty program would be available only in areas that use the EPA test to identify when cars are not meeting pollution standards. Most major urban areas are expected to install auto inspection/maintenance programs for air pollution control by 1982.

The proposal has been listed in the Federal Register, and is open to public comment until July 6, 1979.

Award of Excellence to Burlington, Wisconsin

The first operation and maintenance award for Wisconsin has been presented by the EPA to Burlington's wastewater treatment plant.

The Burlington plant, which processes 2.5 million gallons per day, serves a local population of 3,000 people. The area includes some light industry.

The water pollution control facility has been cited for its success in removing pollutants, both organics and suspended solids, from the wastewater. An especially innovative feature of the plant is its method of sludge disposal — agricultural application.

This award is part of an EPA program to upgrade the public image of wastewater treatment plant operators, and to improve operation of treatment facilities in the six-State Midwest Region.

Indiana Farm Bureau To Clean Up Air Pollution

A breath of fresh air is coming to the west side of Marion County, Indiana, which comprises the heavily polluted Indianapolis metropolitan area.

Under an agreement signed by the Indiana Farm Bureau and the EPA, a vapor collection and disposal-recovery system will be installed by the Bureau at its Westfield gasoline loading and storage facility.

The system will reduce hydrocarbon emissions by more than 300 tons per year, bringing the facility into compliance with Federal regulations.

EPA had issued a Notice of Violation against the facility in May, 1978.

briefs...briefs...briefs...briefs...briefs...briefs...briefs...

Farmworkers's Health Protected by New Plans

The protection of migrant farmworkers from health-endangering pesticide misuse was the subject of a recent meeting held in Chicago by EPA Region V.

Legal and technical personnel from State agencies, EPA, and migrant legal action groups met to formulate a plan to improve reporting and enforcement of pesticide misuse.

The major problem in handling these cases is learning of the incident in enough time for EPA or the State to take action. An increased education effort for migrants on their rights under FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act), and better coordination between government agencies are planned for the future.

EPA Fines Texaco Over Gas Switching

The EPA has fined several Texaco California gasoline suppliers and retailers a total of $159,000 in penalties for the illegal sale of leaded gasoline marked as "unleaded."

This is the most serious instance of fuel switching ever prosecuted by EPA. Motorists who thought they were buying unleaded gas to protect emissions controls were actually being sold leaded gas which destroys the auto's catalytic converter.

The deceptive selling practices were discovered as a result of a citizen's complaint.

Wisconsin Awarded Funds for Toxics Study

EPA has awarded $202,847 to the State of Wisconsin for an environmental epidemiology study.

The funds will be used to study health problems related to formaldehyde vapors being emitted by certain types of mobile home construction materials.

Five States throughout the country have received funds under this grant program, including Michigan in Region V. These grants are the first to be awarded under the 1976 Toxic Substances Control Act (TSCA).

Ohio Coal, Scrubbers Found Equal in Cost

The cost to consumers will be about the same if electric utilities install anti-pollution devices or shift to low-sulfur coal to clean up their emissions. The increase would be about seven percent, or $1 a month.

These figures were calculated for users of Cleveland Electric Illuminating Company (CEI), because they are located in a heavily polluted area.

Wisconsin Nonpoint Pollution Study Funded

A Wisconsin DNR project to monitor urban and rural nonpoint source pollutant loads that pour into Lake Michigan has been awarded an additional $90,156 grant from EPA.

Data compiled in this study will enable design and development of controls to reduce Lake Michigan pollution due to urban and rural runoff, as from city streetwashings, winter road salting and snowmelt, farms, and animal excrement.

The Wisconsin DNR began work on the project in 1974. Completion date is set for early 1980.

1979 calendar

JUNE 4-5

LAND TREATMENT OF MUNICIPAL WASTEWATER EFFLUENTS, sponsored by EPA and the Army Corps of Engineers for consulting and municipal design engineers, and officials concerned with water pollution control. Will cover land treatment systems, health aspects, management and monitoring options, public relations programs, and case histories. No fee, attendance limited to 400. At the Ramada O'Hare Inn, **Des Plaines, Illinois.** Contact: Marti Velasco, EPA Water Division, (312) 353-2314.

JUNE 7

HAZARDOUS MATERIALS SPILLS. Seminar to improve public service delivery capabilities of local governments, provide continuing education for emergency personnel, and bring together resource people involved in hazardous materials. At the Continuing Education Center, **Toledo, Ohio.** Contact Mary Jo Smith or Ruth Meinhard (419)537-2291.

JUNE 7-8

INTERAGENCY ENERGY/ENVIRONMENT RESEARCH AND DEVELOPMENT PROGRAM, sponsored by more than a dozen Federal agencies. Topics include energy/environmental regulations, control technology, energy and the ocean, atmospheric transformation, and health effects. $15 registration fee. At Shoreham Americana, off **Rock Creek Parkway, Washington, D.C.** Contact Kathleen E. Dixon (301)871-4711.

JUNE 8

ECONOMIC ASPECTS OF AIR AND WATER POLLUTION CON-

ENVIRONMENTAL IMPACT STATEMENTS

Sponsoring Agency Project Number Type of EIS	Project Location	Description	Summary of Comments	Comment Date Rating
Federal Highway Administration 79-011-422 (Draft)	Bloomington, IN	Construction of 4-lane highway, Third St. corridor	Additional information requested on noise impacts	LO-2 4/12/79
Federal Highway Administration 78-031-421 (Final)	Pike & Adams Counties, IL	Highway construction FAP 408	Concerns regarding induced development not addressed	4/19/79
Corps of Engineers 79-019-194 (Draft supplement to Final)	Mankato, North Mankato, Le Hiller, MN	Flood control, recreational development on Minnesota River	Sufficient information provided	LO-1 4/19/79
Housing and Urban Development 79-013-1026 (Draft)	Milwaukee, WI	Urban renewal, Plankenton House	Additional informatioon requested on alternative uses of Plankenton House	LO-2 4/23/79
Federal Aviation Administration 78-007-413 (Final)	Menominee County Airport, MI	New runway construction	Noise concerns and wetlands impacts not adequately addressed	4/30/79
Corps of Engineers 79-007-133 (Draft)	Red Run - Lower Clinton River, MI	Structural modification for flood control	Reservations regarding impacts on water quality and Clinton River ecosystem. Lack of consideration of alternatives.	ER-2 5/1/79
Corps of Engineers 79-009-151 (Draft)	Louisville Lake, Clay and Effingham Counties, IL	Multi-Purpose project for flood control, water supply general recreation	Concerns expressed over water quality due to non-point source pollution. Request further evaluation of Effingham site alternative.	ER-2 5/3/79
Federal Highway Administration 75-102-423 (Final)	Manistique, MI	US-2, Bridge construction	Concerns adequately addressed. Project coordinated with DNR and Fish and Wildlife Service.	5/4/79
Corps of Engineers 77-052-126 (Final)	Manitowoc County, WI	Small-boat harbor construction	Water quality concerns adequately addressed	5/8/79
Corps of Engineers 77-041-126 (Final)	Racine County, WI	Small-boat harbor construction	Comments adequately addressed	5/8/79

1979 calendar

TROLS, sponsored by Notre Dame University, for corporate and government officials. At St. Mary's College, **Notre Dame, Indiana**. Contact Mark J. Fitzgerald, (219)283-6213.

JUNE 12

HEALTH EFFECTS OF OZONE, sponsored by the Illinois Institute of Natural Resources, Illinois EPA, and Pollution Control Board. At the Pick-Congress Hotel, **Chicago, Illinois.** Contact Eileen Johnston at (312)793-3895.

JULY 9-11

WASTEWATER TREATMENT PLANT OPERATION AND MAINTENANCE, sponsored by EPA. Will cover plant planning and funding, design, equipment selection, efficient operation, equipment and plant start-up. At the Hyatt Regency Hotel, Atlanta, Georgia. Contact Marilyn at the Wastewater Technical School, P.O. Box 370, **Neosho, MO** 64850, (417) 451-2786.

JULY 26-28

WASTE ALERT, sponsored by national public interest groups. Three-day workshop focusing on solid and hazardous waste management. Citizens, State officials, industry representatives, and technical experts will meet at the University of **Wisconsin, Madison** to examine programs under RCRA. To encourage public participation, promote cooperation between citizen groups, State agencies, and elected officials. Contact Mark Murray, American Public Health Association, 1015 18th St., NW, Washington, DC 20036 (202)467-5038.

1979 calendar

continued from page 23

AUGUST 13-17
ENVIRONMENTAL EDUCATION. To present ecological concepts leading to an understanding of wise environmental practices, receive first-hand experience in soils study, vironmental practices, receive first-hand experience in soils study, terrestrial and aquatic ecosystems, fish and game management. At Silver Lake College, Manitowoc, Wisconsin. Contact Edward Ehlert, 1115 N. 8th St., Manitowoc, Wisconsin, 54220. (414)684-3144.

OCTOBER 16-7
AQUATIC TOXICOLOGY, sponsored by the American Society for Testing and Materials (ASTM). To provide a forum for the presentation and discussion of new concepts, methods and research in applied and basic aquatic toxicology and hazard assessment. At the McCormick Inn, Chicago , Illinois. Contact Dean Branson, Dow Chemical USA, 1702 Building, Midland, Michigan, 48640 (517)636-2730.

What's Your Opinion?

Send us your ideas on Environment Midwest stories, and the environmental issues in your area. We want to hear from you.

As space permits, your comments will be included in the magazine.

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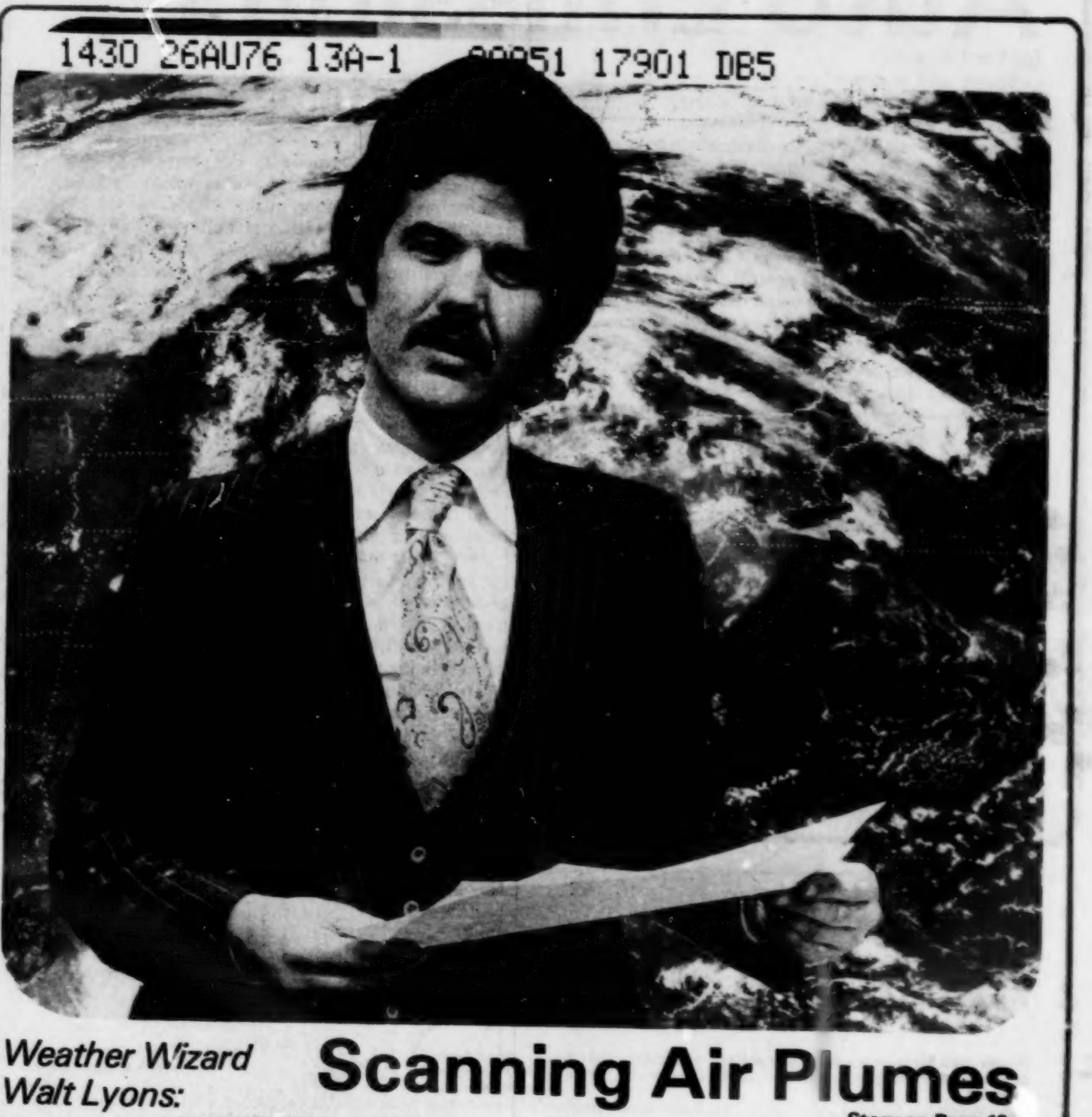
JULY 1979

EPA ENVIRONMENT MIDWEST



Weather Wizard Walt Lyons: **Scanning Air Plumes**

Story on Page 12

Tampering with Auto Emissions

By Kent Kozina

Spring and summer are auto tune-up seasons, when many motorists take their grumbly, winter-weary engines and make them purr. When they start fooling with their engines, however, some people are sabotaging the car's operating efficiency as well as poisoning the nation's air.

The prime targets of these emissions-fiddlers, according to an extensive EPA tampering survey, are the exhaust gas recirculation system (13 percent, the vacuum spark retard (11 percent), and the idle fuel/air mixture screws (65 percent).

Fuel switching is another widespread activity. Another EPA survey observed thousands of autos as they were fueled and found that about10 percent of the nation's cars are burning leaded gas in cars designed for unleaded fuel only. This ruins the mainstay of today's emission control systems — the catalytic converter.

Naturally, high tampering rates contribute heavily to the ozone, carbon monoxide, and nitrogen oxide pollution now plaguing our cities. Fuel switching has an even greater potential for increasing hydrocarbon and carbon monoxide emissions. Such poisoning of the catalytic converter can cause up to an eight-fold increase in these pollutants. A 10 percent rate of fuel switching also represents a billion dollar loss in motorists' investments in their catalytic converters purchased with the car.

People don't tamper with their cars to hurt air quality; they tamper because they think it will improve their gas mileage, or the car's overall performance. But that's a false assumption.

Emission control systems today are integrated with the overall engine operation, according to Steve Martens, staff engineer with the General Motors Corporation.

Tampering with or disconnecting a part can have adverse effects on the operation of the engine and other mechanical components. For example, exhaust gas recirculation affects intake manifold vacuum, which affects the shifting quality of some automatic transmissions. Or a misadjustment of the idle air/fuel mixture can hurt gas mileage: Excess fuel in the engine will go unburned into the exhaust system, where the catalytic converter will burn itself out trying to clean the exhaust. Because of this, the EPA tampering survey concluded that idle mixture misadjustments represent "the greatest single cause of maintenance-related pollution from post-1974 vehicles."

Those same overworked catalysts produce the pungent "rotten egg" smell — hydrogen sulfide — often noticed in congested, slow-moving traffic. That smell is a strong and clear indication that the motorist is probably wasting gasoline...and slowly ruining his catalyst in the process.

Most cars made since 1975 are equipped with catalytic converters to clean up the exhaust fumes and to comply with Federal emissions standards. The catalyst is a simple afterburner of engine exhaust that has no negative impact on gas mileage. In fact, the catalyst actually contributes to better gas mileage.

The misconception that tampering improves vehicle performance harks back to the precatalyst days — the 1973-74 model years — when emission controls were less sophisticated and less fuel efficient than in post -1975 models. Yet, even though many cars suffered a fuel penalty then, tampering

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Leah Wilson . . . . Graphic Design

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with them was still unlikely to do anything but make fuel economy worse while increasing emissions.

In 1974, EPA delivered a number of 1973 and 1974 cars to a representative sample of nondealer service garages which advertised thay could improve fuel economy. The mechanics were asked to do whatever they could to increase the gas mileage on these cars. The result was that about two-thirds of the cars lost fuel economy and increased emissions.

"Gradually, it should dawn on people that they don't have to tamper anymore," said GM's Martens. "With knowledgeable people, at lease, I think there is much less tampering going on today, because the motive, as far as driveability, just isn't there."

Another reason not to tamper is that the increased pollution from a tampered car makes it a prime candidate for rejection in an auto exhaust inspection program.

Mandatory auto exhaust inspection and maintenance programs are required by the Clean Air Act for metropolitan areas with the worst ozone and carbon monoxide pollution problems. Approximately 80 metropolitan areas nationwide will have programs by 1983.

If all the cars in the tampering survey were to be checked against the emissions cutpoints of the New Jersey State inspection program, for example, 35 percent of the cars would end up back at the garage for repairs and subsequent retesting before the owner could obtain his vehicle registration. In contrast, only 14 percent of the nontampered cars would have failed the comparatively lenient New Jersey standards.

Considering the costs involved, the potential harm to the automobile and the actual harm to the environment, tampering appears to be a risky business.

Photo By Kokomo Tribune

For gas cheaters, however — people who pump catalyst-damaging leaded fuel into late-model cars — the motive probably is not so much better gas mileage, but a matter of simple economics. Unleaded fuel generally costs one to two cents more per gallon to produce. Because of wholesale and retail markups, however, the price difference at the pump can range from three to 15 cents per gallon.

But, though it may cost less at the pump, leaded gas may not be cheaper in the long run. Lead additives coat engine parts and shorten the life of spark plugs, the exhaust system, and the carburetor.

Tests by a major refiner on a fleet of vehicles in 1972 show that maintenance costs, averaged over a car's lifetime, were about seven cents per gallon more with leaded fuel. And that does not consider the cost of replacing the catalytic converter or the health costs of increased airborne lead, hydrocarbons, and carbon monoxide.

EPA has been working with the Department of Energy (DOE) to reduce the incentive and opportunity for fuel switching. The result: DOE has proposed regulations to control the leaded/unleaded gas price differential. The proposed rules include provisions to:

1) limit the price differential between leaded and and unleaded gas of similar octane levels
2) create a system (perhaps colored flags) for gas retailers to inform the public when they have no unleaded gas available
3) require gasoline retailers to display unleaded gas prices with the same prominence as leaded gas prices

Other recent actions by EPA and DOE attempt to get at the root of the problem by increasing the availability of unleaded fuel. EPA has temporarily suspended its ban of MMT (an octane-boosting additive to unleaded gasoline which causes increased hydrocarbon emissions) and has proposed to extend for one year its regulations to phase down the lead content of gasoline. To qualify for the waiver on gasoline lead content, however, petroleum refineries must either produce at least 45 percent of their total fuel output as unleaded, or increase production of unleaded gas by eight percent over last year's production.

EPA data suggest that these relaxations will not endanger public health, as long as they are only temporary.

DOE also has proposed regulations to allow petroleum refineries to charge retailers two cents per gallon more for any additional unleaded gasoline produced.

These actions will increase unleaded fuel production by an estimated 800,000 barrels per day. By thus eliminating the relative shortage of unleaded fuel,

COMMON EMISSION CONTROLS

SYSTEM	PURPOSE	FUNCTION
Positive Crankcase Ventilation (PCV)	Reduces HC emissions; helps prevent sludge in crankcase oil	Recycles "blowby" gases escaping from pistons, into combustion chamber to be properly burned
Thermostatic Air Cleaner	Reduces HC & CO emissions by allowing a lean air/fuel mixture to burn during engine warm-up periods; increases cold engine performance; helps stop carburetor icing	A temperature sensor controls the release of exhaust-heated air into the carburetor for fast warm up, better air/fuel mixing
Air Pump Systems	Burns off excess HC & CO in the exhaust pipe; allows engine to be tuned for better drive-ability.	Pumps air into the hot exhaust system so raw and partially-burned fuel can burn properly
Fuel Evaporation Control System	Reduces HC emissions by sealing fuel system from atmosphere; prevents gas evaporation and spillage	A charcoal cannister traps excess fuel vapors, which are then burned when the engine starts; reserve compartment in gas tank prevents spillage from expanding fuel
Exhaust Gas Recirculation System (EGR)	Reduces oxides of nitrogen (NOx) by lowering combustion temperatures, during high speed operation	Recirculates a small amount of exhaust in with the air/fuel mixture to dilute the mixture and lower the temperature of the burning process
Spark Control System	Reduces HC & NOx by controlling ignition spark to improve gas combustion	When engine is working hard, delays firing of spark for more heat energy in exhaust, more complete burning of raw gas
Catalytic Converter	Reduces HC & CO by capturing these gases in the exhaust and burning them; allows engine to be tuned for better fuel economy, more power and performance	Exhaust gases flow through platinum & paladium-covered pellets inside catalyst, which heat up and oxidize HC & CO into harmless water and carbon dioxide

EPA economists expect the price difference between unleaded and leaded fuel will decrease.

In addition, EPA is stepping up its enforcement of Clean Air Act provisions against tampering and fuel switching.

Beginning in 1980, EPA's Mobile Source Enforcement Division will have 40 people in two field offices performing antitampering and antifuel switching investigations and enforcement activities. The field operations, based in Washington, D.C., and in Denver, Colorado, will focus on areas with the worst air quality problems — areas which will soon have auto exhaust inspection programs.

"We will have contractors doing inspections nation-wide," said James Sakolosky, Chief of EPA's Field Enforcement Branch. "We plan to focus primarily on major fleets, major chains of commercial repair facilities, new car dealerships, and gasoline retailers, in an effort to detect tampering and fuel violations — we will then aggressively enforce against any violations we detect."

The Midwest office of the EPA is also gearing up to make sure that motorists get unleaded fuel at the unleaded pump. The Regional effort is intended as a signal to the gasoline marketing industry that EPA is monitoring their activities, and will focus on Midwestern metropolitan areas being considered for auto exhaust inspection programs.

The Regional fuel sampling program will also inspect gas stations for correctly sized nozzles on unleaded pumps, proper labelling of leaded and unleaded gas, and for sufficient availability of unleaded gas.

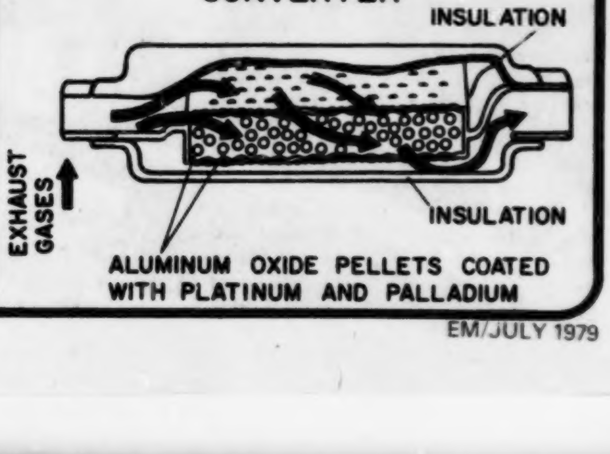
Depending upon the seriousness of the violation and other factors, gasoline retailers and dealerships could be fined up to $10,000 per day, and commercial repair shops and fleet operators up to $2,500 per day of violation if convicted. EPA currently has civil complaints pending against several California gasoline suppliers and retailers, involving $159,000 in penalties, for selling leaded gas labelled as unleaded.

In an era of increasing environmental awareness and resource conservation, the best thing motorists can do for fuel economy and performance is tune their cars to manufacturer's specifications, according to Martens.

By preventing unwarranted "customizing" of emission control systems, motorists can better assure adequate performance and a cleaner summertime breeze.

Kent Kozina is a Public Information Specialist in EPA's Region V Air Programs Branch, Air and Hazardous Materials Division.

EXHAUST GAS FLOW-THRU PELLET-STYLE CATALYTIC CONVERTER



Benzene Pollution Found

EPA Sleuths To Solve Chemical Mystery

By Nancy McKinney

There's a mystery in the water at Granger, Indiana, and EPA's Water Supply "detectives" are trying to solve it.

Sometimes the case work of Region V's Water Supply Branch does read like a detective story — checking out leads, trying to piece together scattered information, and theorizing about possible "suspects" in drinking water contamination cases.

This particular case began when the St. Joseph County Health Department in South Bend and ERGO Instruments in nearby Granger, Indiana, notified EPA of an unusual taste and odor in ERGO's drinking water.

That water was sampled by EPA and it showed very high levels of benzene, a known carcinogen. Benzene is a cyclic hydrocarbon with a distinct odor; a colorless liquid commonly used in the manufacture of paints and dyes. It's also found in gasoline.

Benzene is considered dangerous enough to have a time limit attached to its recommended maximum concentration — of 27 parts per billion for one day in drinking water, and 25 parts per million for eight hours in the air. Benzene intoxication can cause central nervous system and/or blood pathology.

"The second we walked in the door, we knew there was a pretty big problem out there. The smell hit us right away," said David Wagner, Chief of the Primacy Section of the Region V Water Supply Branch.

The water at ERGO contained an average of 8.5 parts benzene per million, or about 300 times the recommended maximum.

EPA has conducted a thorough health effects study of the 30 employees at the ERGO plant.

"Human studies indicate cytotoxic effects can occur from benzene exposure, and there has been a triple-threat exposure for those people at ERGO, because not only did they drink that water these past 14 months but they washed in it and inhaled the fumes as well," said Joseph Prince, EPA Regional Toxicologist and Health Effects Specialist in the Water Supply Branch.

Two groups of people were sampled in EPA's survey — ERGO's employees and the employees of a similar plant nearby, where no contamination was found. The results for the two groups will be compared to see if there are any generalized differences in ERGO's samples. A register of both groups will be maintained, with continued analysis and evaluation.

Both groups had a physical examination, and blood samples were taken for hematological studies. Cytogenetic studies are also being done on the blood samples to check for chromosomal aberrations.

The results of the studies will be made public when completed.

EPA also mapped out a sampling plan for the water in the residential area around the plant, and notified the public that their wells should be tested if an unusual odor had been noticed.

"Although our sampling plan should cover the area, we suggested that the residents call us if they had a problem. We just don't want to miss anyone," Wagner said.

Residents read about the problem at ERGO in local newspapers, and many called EPA to request water sampling. EPA chose 14 of those in areas that would be representative samples of the town's water.

"When I get that letter back saying my water's okay, I'm going to frame it and put it up on the wall," said a local beauty shop owner, who was concerned that her customers might have heard of the problem at ERGO and would stop coming to her shop.

A local builder wanted EPA to sample his home's water, so he could reassure nearby clients of the safety of the town's water.

"When I lived in the city, I used to get a glass of water, and it smelled so funny, I'd dump it out and get a glass of beer instead. Who wants to drink all that chlorine and fluoride and all that junk?" a grandfatherly resident told EPA's samplers.

"We have really fine water around here. I hope it's not ruined by any of that chemical stuff like at that factory," he said.

That sentiment was echoed at the local health department.

"Granger is right outside of South Bend, but it's always been just a little rural town. That's why people like it out there. It's all wooded and unspoiled. It would certainly be a shame if any of that was ruined by chemical pollution," said Dr. W. McCraley of the St. Joseph County Health Department.

EPA has sampled the area's water three times — at a total of 48 homes — and has found no benzene in the water of residents around ERGO. The contamination has been found only in ERGO's water.

EPA's Enforcement Division is now checking to determine the source of the benzene contamination.

Local residents and business people have been calling EPA with possible leads, and local industries have been cooperating with EPA's investigation.

"We're contacting several local industries regarding past chemical disposal practices as a possible source," said Susan Anthony of EPA's Enforcement Division.

The investigation at Granger, Indiana, will continue until the source is found and cleaned up. Until then, the employees of ERGO Industries and Granger's residents are waiting, and hoping.

Nancy McKinney is the former editor of Environment Midwest.

Great Lakes Ships

Great Lakes Spawn a Special Breed of Ships and Sailors

There are no atheists in foxholes, they say. The same may also apply to the crews of Great Lakes ships, whose thousand-foot ore boats pitch and roll in 10-foot waves like leaves blown by an autumn wind and whose smaller craft bob even more ferociously.

There probably is no other place on earth that more effectively reduces man to his mortal size than the open waters, a natural environment that clearly holds its ground against the technological wizardry of our age.

This month, in the height of the Great Lakes shipping season, we look at some people and ceremonies that acknowledge the spiritual bond between these men and women and their five lakes.

The Lake Is His Parish

By Frank Corrado

He was born miles from the water's edge. He wanted to be just a regular parish priest, but as chance — or Providence — would have it, he is the sailors' priest.

Father James Keating has many titles. He is the new pastor of St. Francis De Salles parish on Chicago's Southeast Side (one priest to minister to 1,300 families, with a promise of some help). He is the National Director of the Catholic Apostolate of the Sea. And he is also a friend in need to sailors who ply the Great Lakes.

"No one cares about the sailor," he says, quite matter-of-factly. "They're in port just long enough to unload. Six, maybe eight hours. The foreign sailors are robbed, overcharged. They're not going to be around long enough to prosecute anybody.

"I remember the problem we had last summer in Green Bay. The city wouldn't let the boats unload any garbage. One of the boats was fumigated improperly. And when it got out to sea, two children who were traveling with a crew family died."

It's a grim picture he paints. But if you've ever been around a Great Lakes port, you know what he means. Those ports tend to be desolate places, places buses and cabs don't normally service, places you usually have to get into and out of on foot.

Back in 1958, when the Port of Chicago was established, Father

Continued on page 7

EPA Photo/Susan Nelson

A Bell Tolls for Unsung Heroes

By Susan Nelson

For their importance to the United States, the Great Lakes tend to be taken for granted. The magnificent, interconnecting bodies of freshwater—the world's largest reservoir — have more than 4,000 miles of shoreline along the eight States that border them. They contain 95 percent of the freshwater in the U.S. An estimated 44 million people — one-fifth of the U.S. population — live within the U.S. Great Lakes Basin, which drains into the lakes, and millions of those millions get all their water from the lakes that came into being when the glaciers receded some 12,000 years ago.

If the lakes themselves are taken for granted by most of us, they are held in respect by the men and women whose ships ply the five Great Lakes and their connecting channels. For the Great Lakes are said to have claimed more ships than any of the Seven Seas has claimed.

Great Lakes commerce, perilous as it may be, is growing. It is certain to grow even faster, both because of the current fuel crisis and because recent winters' violent blizzards have brought rail and truck shipping to a standstill. Shipping of iron ore for the U.S. steel industry is at 94 percent capacity, with a full order book through August, says James Fish of the Great Lakes Commission. And Soo Locks commerce continues to top commerce through

Continued on page 8

← Mariners' Church

EPA Photo/Susan Nelson

Father Keating and his parish.

Keating was at St. Patrick's parish in South Chicago. Because of that church's proximity to the city's port, Calumet Harbor, one of his extra duties was to minister to sailors. "In many dioceses," he notes, "this calling is considered the last of a priest's ministry. Sailors aren't a special interest group. They're not out there marching for their cause."

But in 1968, 10 years later, there was a dock strike in Chicago. And the new Cardinal, John Cody, who had been bishop in the big port city of New Orleans, called St. Patrick's to ask what the Port Chaplain was going to do about the strike.

"So I traveled around the country to see what was being done in other port cities," he says. Within a few years he moved quickly from Port Chaplain to National Director of the Apostolate of the Sea, which is supported by the U.S. Conference of Bishops.

The Apostolate is located in Chicago at 95th and Ewing and serves a function similar to that of a USO facility: providing sailors with help in calling their families (a priority, especially for foreign sailors), help in getting downtown, help in figuring out currency (also important for non-U.S. sailors), and the like.

The American Apostolate of the Sea program began in 1948. It is an international organization that originated in Scotland in the 1920s and now is represented in ports all over the world.

Father Keating is strongly interested in increasing ties with similar religious programs for seafarers. The other sailors' service organization in Chicago is run by the Dutch Reformed Church and is located at Calumet Harbor. But Father Keating says that group wants to maintain a separate program, even though the Calumet port will be phased out. One thing going for his Apostolate is its location, at Iroquois Landing, the new Port of Chicago, which will supplant Calumet Harbor.

Shipping is changing, and Father Keating doesn't think it's for the better, so far as sailors are concerned. He points to the increasing use of impoverished Third World sailors, who sign on for short stints for a dollar a day in order to earn money to take back home with them. He notes increasing problems with sailors from Greece and the Communist bloc countries, who often jump ship and leave behind wakes of intergovernmental confusion.

"I really can't get involved in these problems between the sailors and the boat owners," he says. "It would be too easy for them to just stop me from coming on board. I've got to try and help the sailors with their personal — and spiritual — problems.

"These sailors are considered floaters, drifters, people with no roots. But most of them are family men, who must of necessity lead lonely, boring lives. They're captives of their vessels. On board they lose their individual identities: The captain is 'the old man,' and it's 'cookie' the cook, 'sparks' the radio man, 'chips' the carpenter, and so on."

But even those predictable, even affectionate, substitutes for personal names are undergoing change. Sailors who have no background of sailing lore have no reason to carry on such traditions. With advances in technology, crews and their functions have begun to change.

Now, Father Keating goes on, with the increasing emphasis on costs, even the food used is precooked. "Whom do you complain to when the food doesn't taste good? " he asks.

"I've been able to visit about 100 of the 250 boats that anchored here during the past year," he says. Seafarers' mass is often said aboard Indian vessels, which are always composed of crews that are one-third Catholic, one-third Hindu, and one-third Moslem, just as is the population of India.

It is clear that this gentle Irishman is well suited for his work. His blue eyes, outlined by laugh lines, crackle. He wears a silver cross that is also an anchor. He speaks with pride of the U.S. Apostolate of the Sea monthly newsletter he edits.

And, he recounts, "It was such a great feeling this past Christmas, taking gifts from the Catholic Daughters of America—little shoe boxes with toothpaste, combs, and the like—to a Canadian boat destined to spend the holiday on the lakes. They were so happy that somebody cared."

Frank Corrado is the Director of EPA's Region V Public Affairs Office.

the Panama and the Suez Canals combined.

It was because of the Great Lakes that the Midwest became the country's industrial center: Iron ore from the shores of Lake Superior and limestone and coal from the other Great Lakes have long been barged to the south end of Lake Michigan and the eastern end of Lake Erie. Grain from America's heartland is shipped around the world through the lakes; the Great Lakes are America's agricultural outlet.

It is a little-known fact, perhaps, that Great Lakes ships — "boats" they are called, regardless of size, for Great Lakes captains skip the formalities — do a yeoman's job for the U.S. and the world.

And the men and women who steer these ships loaded with ore or wheat, steel products or other, are the Great Lakes' unsung heroes. Or nearly unsung heroes...

> "The legend lives on from the Chippewa on down
> of the big lake they called 'Gitchegumee.'
> The lake, it is said, never gives up her dead,
> when the skies of November turn gloomy."*

Gordon Lightfoot changed some of the anonymity of the Great Lakes sailors, of course, with his ballad, "The Wreck of the Edmund Fitzgerald," which commemorates that ship's loss November 11, 1975 in Lake Superior.

And slowly, researchers who chart the course of Great Lakes shipping are claiming their own voice. Dr. Richard Wright, director of Bowling Green State University's Center for Archival Collections in Ohio, cites a few statistics from his center's collection, which is the country's largest on Great Lakes shipping:

Since 1679, an estimated 6,000 vessels have gone down in the Great Lakes. This is higher, he thinks, than the loss to any of the oceans.

Why? "Geographic conditions," he says. "Lake Erie is probably the worst because of its shallowness. But Lake Michigan has the crosswinds...Lake Superior is probably the toughest, because it has more wind and water. But it opened up last to shipping and thus has the shortest history," despite its fame due to the *Fitzgerald.*

For a study his group conducted for the Michigan Department of Natural Resources, Dr. Wright learned that "1,300 went down" along that State's 2,232 miles of Great Lakes shores alone.

It is not generally known that the Great Lakes have a very different wave action from that of the high seas. But shipbuilders know it, and Great Lakes ships are therefore constructed differently.

"Ocean captains are very derogatory of Great Lakes captains," Dr. Wright notes, "until they've made one run on the lakes." That first run shows, more than sailors' wrangles ever could, what makes Great Lakes sailing a battle of captain versus nature. "The Great Lakes are restricted, crowded waterways," he says. "Their captains steer those enormous ships up to numerous docks — without a tug — and they do this time after time without so much as nudging the docks.

"And there is the fog," which comes up without warning to obscure rocks and sandbars from waves 10 feet and higher. "Unlike the oceans, the Great Lakes offer no place to run to when the bad weather hits," he concludes.

> "In a musty old hall in Detroit they prayed
> in the Maritime Sailors' Cathedral.
> The church bell chimed 'til it rang 29 times
> for each man on the Edmund Fitzgerald."*

Shipwrecks, such as that of the *Fitzgerald,* or the ill-fated Master Vessel *Cartierchiffe Hall* in Lake Superior this past June 5, do not go unnoticed by the people who respect the Great Lakes and their sailors. The bells of Mariners' Church (also known as the Maritime Sailors' Cathedral) in Detroit toll once for each life lost. And they toll again once a year in the sturdy, national landmark church that was founded in 1842, constructed in stone in 1849, and moved in 1955 to its present location — within a line's throw of both Detroit's Renaissance Center complex and the tunnel to Windsor, Ontario.

At that time, before Great Lakes shipping hits full stride, Mariners' Church holds its Blessing of the Fleet, as it has since 1965, when the Rev. Richard W. Ingalls became its rector.

This past March 11 was a cold and blustery Sunday. The Detroit River moved rapidly, pushing the harsh winter's ice toward Lake Erie. And, a few blocks away, in light warmed by stained glass with nautical motifs, men of the Great Lakes and their women assembled for the memorial service and blessing.

It is a lengthy service, one that Detroit and Canadian TV crews now cover. It begins at 11 a.m., with a procession of U.S. and Canadian yachtswomen and men, with bagpipers and representatives of local schools, the navies and coast guards of both countries, the Royal Canadian Mounted Police, and numerous other military and ship-related groups from the two countries.

National anthems of both nations are sung, and passages from the Bible and other sources are read. Even Psalm 23 leaves no doubt as to the focus of the ceremony. It is the Seaman's version, and it begins: "The Lord is my Pilot, I shall not drift. He lighteth me across the dark waters; He steereth me in the deep channels."

The most solemn moments of a most solemn ceremony are during The Last Call, in which the immense bronze bell of the passenger steamer *Octorara* is rung once more for each Great Lakes seaman or captain who has died in the year since the previous Blessing of the Fleet. On March 11, 1979, the bell was struck 42 times by Captain Ronald Ingram, president of the Detroit area's International Ship Masters Association and captain of EPA's Research Vessel *Crockett.*

There is a presentation of wreaths — children's life preservers — "reminding us all, no matter what our color, nation, religion or politics, (we are children of God, in the brotherhood of man.")

And then comes the Blessing of the Fleet, in which flags from those ships that will ply the Great Lakes in the coming year are presented at the altar of Mariners' Church, beneath the lantern of a lost ship that glows for all who have surrendered to those fickle, treacherous waters.

Flags from the major shipping companies, from the U.S. Coast Guard, and from the U.S. Environmental Protection Agency were carried forward, opened so that the congregation might see them, and then placed on the altar. (The R/V Crockett is in her second year of monitoring Lake Erie, under auspices of EPA's Great Lakes National Program Office.)

> "And all that remains is the faces and the names
> of the wives and the sons and the daughters.
> Lake Huron rolls, Superior sings in the rooms
> of her ice-water mansion. Old Michigan steams
> like a young man's dreams; the islands and bays
> are for sportsmen. And farther below Lake Ontario takes in what Lake Erie can send her.
> And the iron boats go, as the mariners all know,
> with the Gales of November remembered."*

**© Moose Music 1976 (CAPAC). Lyrics by Gordon Lightfoot. Used by permission.*

Susan Nelson is a Writer/Editor for Region V EPA assigned to the Great Lakes National Program Office.

CONSTRUCTION GRANTS

Applicant	Award Amount	Date
Illinois		
State of Illinois	$4,302,750	5/9
Lincoln	12,225	5/8
Pana	6,075	5/9
Ridge Farm	9,825	5/18
Freeman Spur	375	5/7
Villa Park	7,470	5/15
Tinley Park	2,775	5/18
Antioch	8,625	5/29
Potomac	1,875	5/9
Kenilworth	48,300	5/22
Elmwood	45,375	5/9
Hidgkins	17,175	5/22
Morton	112,275	5/30
Tonica	12,759	5/30
Pawnee	35,250	5/7
Little Swan Lake Sanitary District	14,850	5/15
Sterling	31,714	5/17
Aurora Sanitary District	3,016,088	5/17
Carlock	53,175	5/30
Casey	9,150	5/25
Downs	37,360	5/29
Farmersville	17,325	5/14
Barrington	27,675	5/30
Collinsville	69,310	5/11
Naperville	5,229	5/17
Humboldt	76,275	5/25
Goodfield	61,500	5/24
Galesburg Sanitary District	50,925	5/3
INDIANA		
Hanover	26,515	5/9
Morocco	10,050	5/10
Lowell	90,300	5/18
Dunkirk	3,075	5/8
Homecroft	13,650	5/7
North Salem	3,675	5/3
Elkhart	75,825	5/17
Rochester	48,750	5/24
Kingsford Heights	15,000	5/24
Prince's Lake	9,975	5/15
Ossian	12,675	5/17
Kewanna	18,750	5/7
Andrews	30,075	5/7
Kouts	49,275	5/17
Elkhart	27,375	5/15
Garrett	8,250	5/29
Evansville	1,542,300	5/25
Burlington	983,550	5/30
Michigan		
Bessemer	7,200	5/8
L'Anse	525	5/3
South Lyon	23,775	5/29
Grand Rapids	300,075	5/29
Clark Township	13,275	5/7
Warverville	24,225	5/22
Lapeer County	13,050	5/25
Muskegon County	11,400	5/25
Detroit	2,535,525	5/14
Detroit	353,775	5/31
Ecorse Creek Drainage District	5,262,600	5/22
Portage Lake	152,325	5/10
Jackson County	655,500	5/17
Alpena County	507,225	5/8
Oakland County	71,475	5/29
Croswell	32,250	5/17
Corunna	1,289,925	5/31
Minnesota		
Jeffers	69,795	5/17
Ely	16,575	5/15
Maple Lake	21,375	5/8
New Ulm	93,225	5/3
Bemidji	73,725	5/15
Trimont	2,400	5/22
Maynard	14,775	5/7
Truman	25,650	5/3
Keewatin	16,500	5/3
Lynd	17,550	5/29
Hokah	22,425	5/29
Argyle	15,825	5/29
Oklee	14,400	5/29
Springfield	36,150	5/29
Gonvick	34,425	5/29
Pipestone	21,600	5/16
Ogilvie	24,150	5/3
Watson	22,500	5/29
Minnesota Lake	24,225	5/3
Dennison	17,325	5/31
New Richland	30,825	5/31
Hackensack	19,200	5/31
Longville	21,600	5/16
Williams	17,250	5/3
Wendell	20,250	5/30
Backus	19,950	5/16
Goodridge	13,650	5/29
Moorhead	8,250	5/22
Moorhead	5,925	5/3
Eveleth-Leonidas	45,000	5/16
Lacrescent	14,925	5/3
St. Cloud	3,797,175	5/30
Jeffers	69,795	5/17
Ohio		
Lucas County	7,125	5/31
Astabula County	11,250	5/25
Wooster	41,325	5/11
Canton	26,250	5/15
Fostoria	87,630	5/14
New Madison	57,225	5/15
Killbuck	24,750	5/15
North Olmsted	142,500	5/14
Bedford Heights	66,000	5/4
Auglaize County	14,475	5/15
Trumbull	12,300	5/3
Dolphos	294,300	5/30
Canton	576,975	5/10
Summit County	944,325	5/17
Plain City	5,625	5/25
Wisconsin		
Avoca	3,580	5/17
Barron	11,925	5/24
Cobb	6,225	5/17
Colfax	16,350	5/7
Waupaca	15,375	5/15
Black Wolf Sanitary District	44,700	5/15
Francis Creek	7,125	5/30
Prairie Du Chien	23,850	5/22
Grant County/Orchard Manor Nur	5,625	5/15
Adams	21,000	5/30
Sheboygan Falls	7,825	5/8
Tomah	19,575	5/24
Denmark	41,563	5/29
Nashotah	29,775	5/22
Sheboygan Falls	1,350	5/7
Winneconne	207,525	5/25
Monticello	39,000	5/15
Pewaukee	707,250	5/10
Casco	13,725	5/30

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EDO Opens Doors to Students & Public

EPA Photos/Susan Nelson

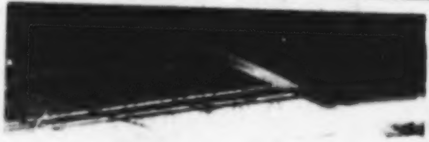
By Susan Nelson

June 4 was a big day for EPA Region V's Eastern District Office. That Monday the modern facility opened its doors to the public for hour-long tours of the lab and offices EPA maintains in Westlake, Ohio, just west of Cleveland.

Twenty-three tours of Cleveland-area schoolchildren were held between 9 a.m. and 3:00 p.m.; 13 evening tours accommodated others members of the general public.

District Offices, which are part of EPA's Surveillance and Analysis Division, put EPA in closer touch with residents of Region V's six States. The Eastern District Office (EDO) serves both Ohio and Michigan; a small number of its 25-person staff is stationed at EPA's Large Lakes Research Station in Grosse Ile, just south of Detroit. (A Western District Office, for Minnesota and Wisconsin, is located in Minneapolis, and a Central District Office in Chicago serves both Illinios and Indiana).

After a welcome and quick summary of EPA given each group by EDO's director, A.R. (Rich) Winklhofer, the groups moved along on five-minute tour stops that explored special air quality monitoring, three phases of special water quailty monitoring, the condition of the Great Lakes and, specifically, Lake Erie (it is showing some definite signs of improvement), and EDO's Emergency Response Vehicle, which is on 24-hour call for spills of oil and other toxic substances. Five minutes were devoted to an explanation of EPA's legal pursuit of polluters, and five minutes were spent viewing Region V's five-part TV special, "The Hazy Days of Summer," which was shown in conjunction with an explanation of vehicle inspection and maintenance programs.



Phil Gehring explains special testing.

A few surprises developed. Each group of students had been invited to bring in a jar of water from a pond or stream near school. One group's sample topped even the highest example chemist Bud Burge had tinted to show low-to-high phosphorus contents in freshwater. An encouraging number of the students, who ranged form 6th grade through high school, seemed

Bud Burge tests water samples for phosphates.

Marty Trembly explains air-quality tests.

Ross Powers holds up bacteria found in freshwater.

Art Gedeon on the Great Lakes.

Joe Fredle demonstrates oil spill cleanup techniques

deeply concerned about trying to protect the environment. And more than a dozen, as they stopped at the final tour station to pick up EPA brochures and to ask questions of Gary Amendola, chief of the Ohio Support Unit, and Willie Harris, an engineer down for the day from Grosse Ile, said they felt the tours could easily have been longer than an hour. (After careful consideration, the EDO staff decided this comment was not merely a sunny-day plea to avoid school altogether.)

Region V planned, coordinated, and prepared special materials for the open house, including Cleveland-area-specific telephone numbers to call for environmental problems of any kind. A limited number of extra copies of these materials is available from the EDO, 25089 Center Ridge Rd., Westlake, OH 44145.

Susan Nelson, a Writer/Editor for Region V EPA, coordinated the Open House.

Midwest "in the soup"

Hazy Blobs Abound

By Frank Corrado

Let's take a little cross-country trip, via satellite.

Our guide is Dr. Walt Lyons, a Chicago TV weatherman, who also happens to be a leading expert on air pollution transport.

"Have you ever noticed that the summertime skies aren't as blue as they used to be? " he asks.

"Studies done at Washington University over the last few years have looked at national weather service visibility reports for the past 50 years. What's been discovered is that visibility in rural areas has progressively worsened, with visibility running only three or four miles in the middle of the afternoon, with brown hazy skies, rather than blue skies.

"From May to October, we have these high pressure systems that come down from Canada with 25 to 30 miles of visibility. They move into midwestern U.S. and sit there. They might just hang around for two or three weeks. The air in this system just makes big lazy clockwise circles hundreds of miles wide," he goes on.

"Emissions from large coal fired power plants in the Ohio River valley, for example, drift lazily along with this flow, with the sun beginning to 'bake' these emissions. What was initially colorless gas is now being converted by the sun into minute particles, including small specks of sulfuric acid.

"So, if you consider the dozens of power plants, especially in the Ohio River valley, pumping tons of pollutants into this essentially nonmoving air mass over the midwestern United States for weeks at a time, that's where the haze is coming from."

This soup is not just made up of sulfate particles, but also of emissions from automobiles — ozone.

Lyons' theory, based on a study of thousands of satellite photos, posits that the hazy blob formed in the Ohio valley turns in a clockwise direction to the north bringing hazy days to Illinois, Iowa, and Minnesota — then turns towards the Great Lakes and up through Canada, then down through New England and out into the ocean.

"We've seen this plume 1,500 miles out into the Atlantic Ocean, and who knows, it may end up in Europe," he speculates further.

Lyons is convinced that the best way to see this process at work is not by

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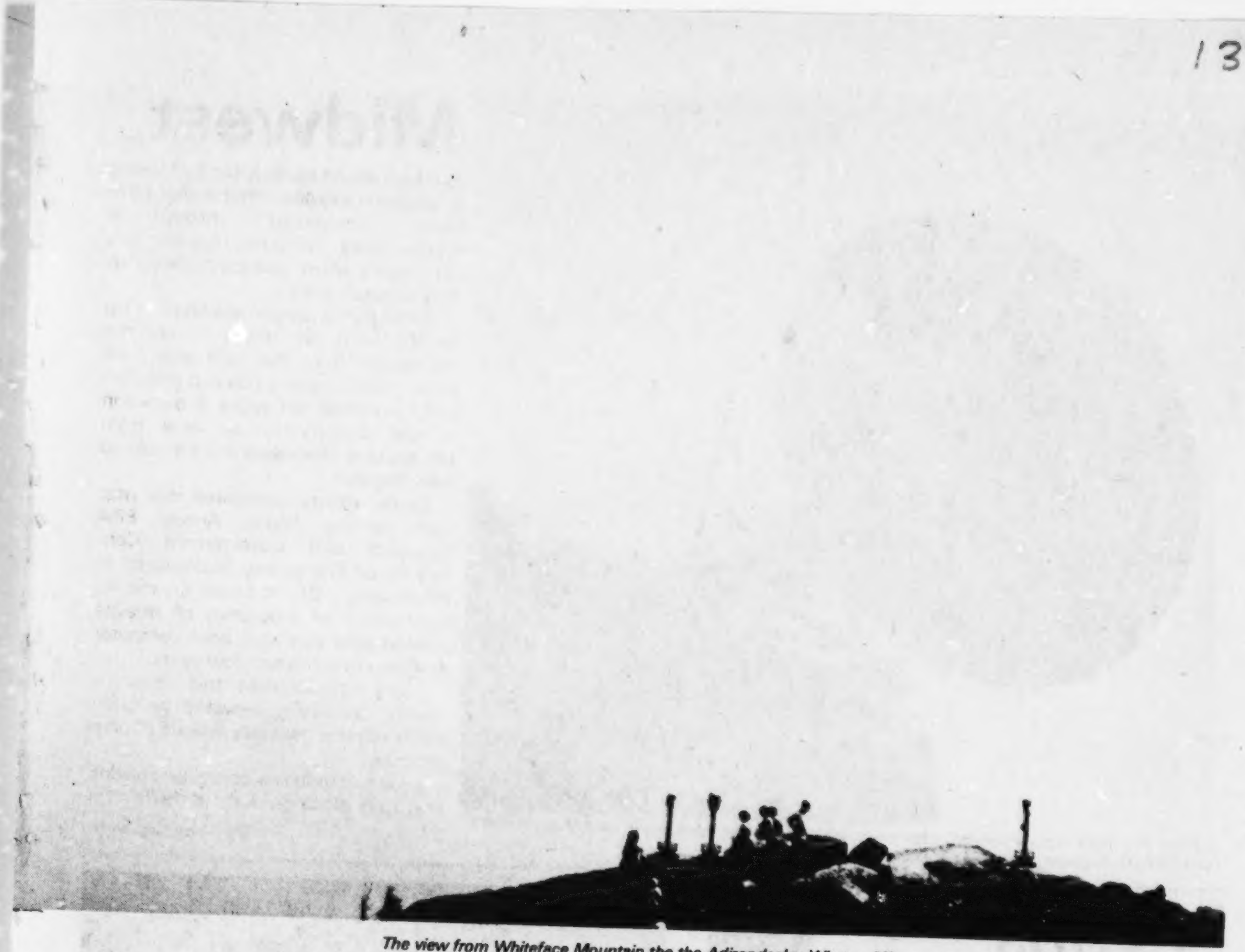


The view from Whiteface Mountain the the Adirondacks: What a difference two days made! Visibility was sharply reduce from the 26th of August, 1977, to the 28th. Blob that reduced visibility here to less than five miles probably started in Ohio River Valley.

Walt Lyons—Weather Wizard

TV weathermen are all characters. We all know that. And if your stereotype includes an image of a wizard with a weathervane in his hand, then you ought to meet Walt Lyons.

Dr. Walt Lyons — he has a Ph.D. from the University of Chicago in Geophysical Sciences — is everything you'd expect in a wizard. Hurried, forgetful, and super knowledgeable in the hocus pocus of science.

But he also has two unexpected traits — one of his favorite subjects is pollution transport, and, best of all in a wizard, you can always understand what he's talking about.

Besides a full-time job at WLS-TV in Chicago, Dr. Walt also is President of MESOMET, Inc. "Computerized Meteorlogical and Environmental Services" as the shingle says.

Working with EPA's pollution transport program director, William Wilson, and other colleagues such as Professor Rudy Husar of Washington University in St. Louis, Lyons is on the cutting edge of efforts to figure out just what the dynamics of air pollution movement are on a global scale.

Lyons has made a half-hour film recapping just what's known about pollution transport in the U.S. And he presented a 15-minute version of that film at a June energy/environment conference sponsored by EPA in Washington.

That presentation, and most of his work, is based on creative use of the incredible U.S. Weather Satellite system. "The quantity of information coming in from those satellites is enough to fill up as many volumes as are in the Library of Congress every ten days," he claims.

The specialists at Lyons' firm use enhanced hard copies of many of the satellite photos to put together a strong case on where the big "globs" are coming from and where they are going (see. separate story on these pollution masses.)

One of Lyon's favorite tools for

Continued on page 14

Big Eye: This "dish" atop a building at the University of Wisconsin, Madison, is used to graph data from the NOAA satellite. Data are processed by MacIDAS computer.

Midwest

running ground studies, but by looking at real-time satellite pictures that have been "processed" through a sophisticated computer system and can clearly show pollutant transport. (See separate story.)

These high pollution readings — up to 160 parts per billion — are not necessarily from the local area," he says. "We're talking about a pollution mass covering the entire mid-section of the country — an area from Louisiana to Minnesota and Ketucky to New England."

Lyons' theory, presented this past June to the Fourth Annual EPA Research and Development Conference on Energy and Environment in Washington, DC, is based on the interpretation of thousands of satellite photographs that have been computer analyzed over the past few years.

Lyons characterizes this observed "soup" as having elevated pollution levels running generally around 80 parts per billion.

Lyons describes a particular episode that took place on June 30,1975: "On

Continued on page 15

Lyons

working with the weather satellites is the MacIDAS computer at the University of Wisconsin. The acronym stands for Man Computer Interactive Data Access System.

The system, when hooked up to weather satellites, allows the data to be manipulated for dozens of uses. As a matter of fact, Lyons feels that local, State, and Federal environmental, agricultural, and other agencies ought to get together and put the system to work for them.

"Right now you've got field programs with people taking samples here and there. It's like the six blind men with the elephant, you really can't get an accurate picture of what's going on," he says."MacIDAS really gives us a picture of the whole elephant for the first time."

Lyons doesn't discount ground studies, but says they need to be done in conjunction with real-time satellite monitoring, which can zero in as close as one square kilometer, and shows pollution at the speed it actually moves.

Continued on page 15

this day a high pressure system was stagnant. It drifted out from New York, out over Cleveland, picked up a bit more pollution in Pittsburgh, went through the Ohio River valley picking up some more pollution there."

The trajectory of the event, he says, suggests that after it passed through the Ohio River valley, where it picked up most of its sulfur dioxide, it went about as far west as Kansas City. It then made a strong turn north to Minnesota.

"I was a weather forecaster up there at the time," he notes, "and when we would get southerly breezes like these, I could automatically lop a few degrees from the high temperature, and drop the visibility to five miles."

The event that Lyons described lasted about four days with the entire states of Iowa, Wisconsin, and Minnesota covered with very polluted air that began out in the Ohio River valley.

"It usually takes a strong Pacific cold front from the west to blow that stuff out to sea," he adds.

Lyons remembers one particular "blob," as he calls these episodes, that, after having made a path similar to the one described above, headed

Continued on page 16

Real good-time computer terminal where MacIDAS computer interacts on real-time basis analyzing satellite observations.

"Being able to watch pollution episodes forming and moving on a real-time basis, could give regulators advance information on whether plants in a certain area should be shut down," says Lyons.

He also believes such a system could assist in developing air pollution models, once actual emission data was plugged in. These models could be used to help set air quality standards, as well as predict where a given plant's emissions would travel to.

"With such a system, you'll be able to press a button and see what visibility was like in any place in the Eastern U.S. in the last five minutes, taking surface winds into account."

"We've got a whole new area of concern here. We're not looking at the carbon monoxide on the streetcorner," says Lyons, "we're looking at the national, and even global scale of what we're putting into the air. Where it comes from, where it goes — the large scale episodes."

"With an integrated system we can get an acid rain tie-in to a pollution episode right away, not a year and a half later," he adds.

An integrated system could help pinpoint where the pollution that causes a harmful acid rain comes from. Acid rain, actually sulfur dioxide dropping from the skies, is caused by fossil-fuel burning, and can eventually destroy the plant life and ecology of a wilderness area, as is happening in the Boundary Waters Canoe Area of northern Minnesota.

Lyons envisions this integrated system inhabiting a large, Midwestern regional war room, lined with teleprinters and other gadgets hooked to satellites and computers. It will look at, in real time, what's happening in the interaction between nature and technology to have officials more intelligently monitor and control pollution.

The system won't be able to finger an individual polluter, but it might give government officials at all levels a better way of coping with the hazy and frequently unhealthy skies.

Frank Corrado

Midwest

600 miles out over the ocean, turned south, then southwest, and three days later hit the Florida peninsula full blast.

Lyons has also been keeping his eye on how the blobs may be impacting agriculture. He is especially interested in the work being done by the University of Minnesota on the impact of ozone on the Nation's $8 billion annual soybean crop.

"We could be losing as much as 25 percent of that crop each year, because of the impact of ozone from these blobs on the plants at key times in the growing process," Lyons says.

At the University of Minnesota, 32 computer-controlled test chambers are located out in the middle of a soybean field where several varieties of the crop are being exposed to controlled concentrations of the pollutant.

"They're finding that when the smog blob passes over and you get 120 ppb for several afternoons in a row, about a 25 percent loss could be taking place," he says.

"We're seeing these blobs 1500 miles off the east coast, just as thick as the day they left the area where the pollution came from," he warns.

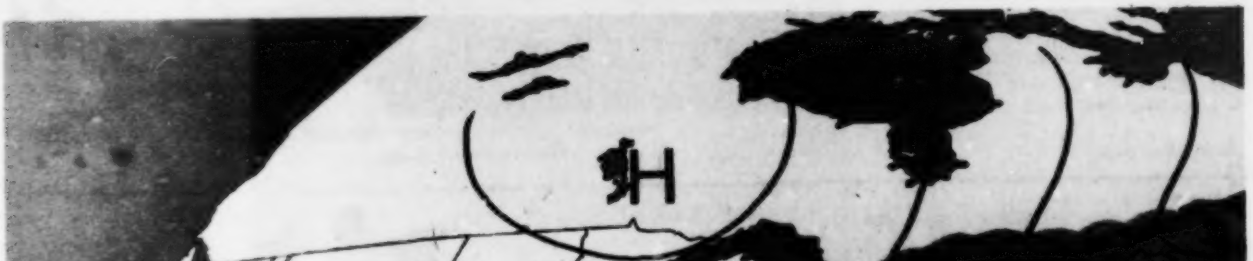
Lyons says there is no doubt that the Ohio River valley, with its large concentration of power plants, is the major contributor to the nation's summer haze problem and to acid rain damage that comes when the blobs are sucked into clouds to make rain.

"One of the strangest things we've seen on these satellite pictures is these large masses of clouds with lots of little holes punched in them. For a long time, we couldn't figure out why there were these holes, but then we realized that what had happened was rain — the smog had been absorbed into the raindrops, and fallen out of the blob," Lyons said. "We've verified this by comparing precipitation data taken from the ground with the satellite pictures of these holes. What we're seeing is acid rain actually being made."

Lyons' presentation, which is in the form of a 30-minute movie, gives strong support to the feelings that the impact of pollution is not just confined to the local area where it's produced.

"We can definitely see now that pollution from any given area is not just a local problem. Due to shifting weather fronts, it can be a problem on a regional, national — or even a global scale."

Frank Corrado is the Director of EPA's Region V Public Affairs Office.



The blob: Dark shading represents 3 miles' visibility, lighter shading, 5 miles' visibility. Animation shows huge area where sulfate areas were so high they reduce visibility significantly. This blob rotated slowly in a clockwise direction before being blown off to the sea by an incoming cold front.

News...News...News...News...Around The Region

Illinois

•Legislation defining and regulating the disposal of hazardous waste in Illinios passed the Senate last month. Based on U.S. EPA guidelines, the bill prohibts dumping of hazardous waste within 1,000 feet of a well or public water supply, or within one mile of a city or township. It also creates a 20-year maintenance fund for closed sites.

•SCA Services of Boston, owner of the hazardous waste disposal site at Wilsonville, is appealing the August decision by a circuit court judge to close the site and remove the wastes already buried there. The appeal hearing began on May 29.

•The Senate passed a bill banning the importation of spent nuclear fuel for storage or disposal into Illinois.

Michigan

•PBB is again in the State news this month— including an announcement of a settlement for 75 farmers for damage to their farms. The settlement amounts have not yet been disclosed, but it is expected to be several million dollars total.

•Futher research into PBB has shown that rats fed high fiber diets have lowered the PBB levels in their bodies faster than those on regular diets. It's still too early to tell whether these results could be used to help rid humans of PBB.

•A second round of tests is being held following a preliminary report that farm childern with high levels of PBB appear to have a "deficit in development performance." Intelligence, achievement, vision coordination, and behavior are being studied.

•A special Joint Committee on Beverage Containers in the State legislature is launching and investigation to find out if consumers or industries are being overly burdened by the State's bottle bill. The investigation will focus on increases in beer and soft drink prices, and workers who have lost their jobs as a result of the law.

•The wetlands protection bill is now before the House. The measure, which passed the Senate without the proposed weakening amendments after four months of debate, is now before the House.

•In a 6-0 vote, the Natural Resources Commission has agreed to auction off mineral rights to 335,609 acres in northern Michigan. This is the State's largest land lease offering since 1972.

Wisconsin

•More than 317,000 tons of potenially hazardous chemical wastes are produced in the State each year, but only 25 percent of it goes to licensed disposal sites, a DNR report states. About 90 percent of the waste is landfilled, but not at properly licensed facilities. Wisconsin has developed a State program to handle this problem, but the DNR estimates it could be five years before the system is totally operational.

•In order to streamline the enviromental impact statement process for State projects, revised guidelines have been proposed by the Wisconsin Environmental Policy Act Interagency Co-ordinating Commission. Public hearings on the revisions were held last month. For more information, contact Caryl Terryl, WEPA Co-ordinator, Room 415, 110 E. Main St., Madison, WI 53702

•The DNR has been petitoned by conservationists, private citizens, and environmental groups not to sidestep public hearings when approving maintenance dredgings of drainage ditches. The petitioners contend that the DNR has two laws governing its regulation of the ditches, and it uses the weak law rather than the strong one in its program.

Ohio

•Hearings are being held by the House Agricultural and Natural Resources Committee on a bill requring local public hearings on landfill applications. The measure also prohibts the Ohio EPA from issuing a landfill permit contary to local zoning ordinances.There is also a bill in subcommittee to allow residents, to vote on whether a hazardous waste disposal facility should be allowed in their community.

•The final environmental inpact statement has been issued on U.S. Steel's proposed $3.75 million mill near Conneaut. The Ohio EPA has also stated that the company would have to offset the new mill's air pollution by finding a way to reduce emissions from another source nearby, because the area is already in nonattainment for oxidants (including ozone).

•A U.S. District Court Judge in Kentucky upheld as constitutional EPA's power under Section 125 of the Clean Air Act to require Ohio utilities to burn local high-sulfur coal. The suit was brought by a Kentucky coal company, which claimed the measure interfered with interstate commerce.

•A State bill prohibiting Ohio utilities from using out-of-State coal to meet pollution standards, and instituting a coal tax to help pay for pollution abatement equipment, has been introduced in the House.

•A technique to "fingerprint" tiny airbourne dust particles has been developed by Materials Consultants [Laboratories of Murrysville. The analysis may be used in the future to pinpoint polluters, as it can tell whether dust is from a steel mill, a power plant, or a feild.

•Nuclear waste is being discussed in the State, in three related actions. The U.S. Energy Department announced that field studies of Ohio salt beds as possible burial sites have been halted until agreement has been obtained from State officials. The Nuclear Regulatory Commission has agreed to notify State officials when radioactive waste from Three Mile Island is shipped through Ohio. The Ohio Senate passed a bill banning any nuclear waste disposal in the State until at least 1983.

•The Ohio EPA and DNR gave qualified support to State-regulated drilling of natural gas in Lake Erie. Under this proposal, the DNR would establish regulations and guidelines after an environmental impact statement is prepared by the Army Corps of Engineers.

Continued on page 18

News...News...Around The Region

Minnesota

Environmentalists in the State are dismayed at the prospects of four measures before the legislature.

•The Senate passed a bill that would take the power to designate wild and scenic rivers away from the DNR and give it to the State Executive Council (the governor and five other elected officials). The bill does not appear likely to pass the House this year, but it will be alive when the legislature reconvenes in 1980.

•The Senate also approved a bill that would prevent the Minnesota Pollution Control Agency (MPCA) from regulating noise emenating from gun clubs. It appears headed for passage.

•In a surprise amendment to an unrelated Senate bill, the House voted to postpone enforcement of a law banning the sale of milk in non-returnable plastic containers until at least 1981.

•An effort to impose a six-year moratorium on the acquisition of wildlife management areas lost by one vote in the House Appropriations Committee. The amendment was supported by farmers who feel the DNR is acquiring land that could be used for agriculture.

•On the plus side, Minnesota's hazardous waste regulations went into effect on June 18. The regulations are based on EPA guidelines and are designed to monitor and regulate hazardous waste from "cradle to grave" MPCA is currently planning a series of workshops for industry, to begin a cooperative effort of managing the State's hazardous waste.

NOV's

- * Shell Oil, Farmer City, IL; hydrocarbons.
- * Texaco, Inc., East Peoria, IL; hydrocarbons.
- * Texaco, Inc., Arlington Heights, IL; hydrocarbons.
- * Clark Oil, Bartonville, IL; hydrocarbons.
- * B.F. Goodrich Co., Avon Lake, OH; vinyl chloride.
- * Central Illinois Light Co. (CILCO), Bartonville, IL; particulates.
- * Union Oil, Des Plaines, IL; hydrocarbons.
- * Clark Oil, Hartford, IL; organics.
- * U.S. Steel, Chemical Div., Ironton, OH; particulates.
- * Williams Pipeline Co., Franklin Park, IL; hydrocarbons.

A Notice of Violation is an official warning from the U.S. EPA that a source is not complying with existing air pollution control regulations.

E I S COMMENTS

Sponsoring Agency, Project Number, Type of EIS	Project Location	Description	Summary of Comments	Comment Date,Rating
Heritage Conservation and Recreation Service 75-005-553 (Final)	Washtenaw County, MI	Construction of 618-acre recreational impoundment	Reservations regarding compliance with State water quality standards. Concerns over nature and location of project.	5/17 Draft ER-2
Veterans Administration 79-017-2500 (Draft)	Ft. Custer, Kalamazoo County, MI or Plum Book, Huron County, OH	National cemetery	No major objections to preferred alternative. Wetlands should be preserved. Environmental reservations regarding Plum Brook site, due to water quality impacts.	5/17 LO-2
Housing & Urban Development 79-027-1015 Draft Supplement	Montgomery County, Dayton, OH	Acquisition and disposition for Newfields New Community	impacts should be measured against present conditions, not against original plan. Mass transit should be discussed.	5/23 ER-2
Corps of Engineers 79-010-100 (Draft)	Penn., W. Va., Ohio, Ky., Ind., and Ill.	Operation and maintenance of locks and dams on Ohio River. Dredging navigation channel	Reservations regarding adverse water quality impacts	5/23 LO-2
Housing & Urban Development 79-015-1024 (Draft)	Scott County, Savage, MN	Housing Development	Reservations regarding air quality impacts, availability of wastewater treatment and energy conservation	5/24 ER-2
General Services Administration 79-025-1106 (Draft)	Milwaukee, WI	Lease construction of new Federal Building	No major objections	5/31 LO-1

CODE: LO - Lack of objections or minor changes suggested.
ER - Environment reservations on certain aspects of project; suggest preliminary determination of impact.
2 - Insufficient information, EPA cannot fully assess project but can make further study of modifications or alternatives.

All Region V EIS Comments are prepared by the office of Federal Activities, Environmental Impact Review Staff For more information contact Barb Taylor at (312) 353-2307,U.S

Environmental news briefs...briefs...briefs...briefs...

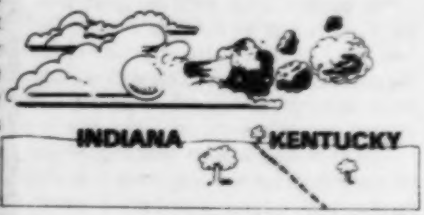
First Public Hearing Held on Pollution Crossing Over State Lines

For the first time, on June 20, EPA held a public hearing to determine if one State's air pollution problems prevent another State from achieving clean air goals. At issue is whether sulfur dioxide emissions from the Indiana-Kentucky Electric Company's Clifty Creek Power Plant, located in Indiana's Jefferson County, pollute the air across the State line in Kentucky.

The plant is near Madison, Indiana, with Kentucky's Trimble and Carroll Counties just across the Ohio River border.

The Governor of Kentucky requested EPA to hold this hearing in accordance with Section 126 of the amended Clean Air Act of 1977. That section authorizes any State or other political subdivision to request that the EPA Administrator determine if any major source is emitting air pollutants in violation of Section 110 of the Clean Air Act.

Section 110 prohibits any stationary source from emitting any air pollutant in amounts that will prevent another State from attaining or maintaining any national air quality standards.



New Data Show Two Ohio Power Plants Meeting Health Standards

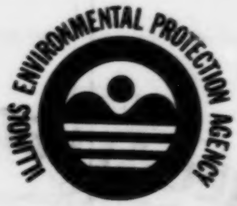
Based on new air quality data, EPA has announced that the Cleveland Electric Illuminating Company will be able to meet Federal air quality emission standards for sulfur dioxide at two of its Lake Erie power plants in the Cleveland area while continuing to burn high-sulfur coal.

The two Cleveland Electric plants are in Eastlake and Avon Lake, Ohio. EPA proposes to change Ohio's clean air plan because new data show that air quality standards are being met by the two plants.

This means that Cleveland Electric could continue to purchase high-sulfur coal, instead of buying out-of-State low-sulfur coal to meet Federal emissions standards.

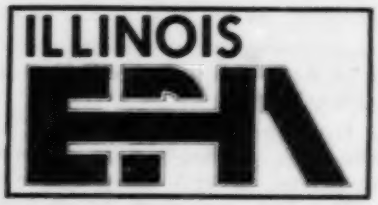
The proposal could save about 70 percent of the coal mining jobs and 63 percent of the Ohio coal production that would otherwise be lost due to compliance with Federal sulfur dioxide regulations, EPA said.

This proposed revision is contingent on Cleveland Electric expanding their air pollution monitoring system to assure continued compliance with the standards.



New Logo for Illinois EPA

The Illinois Environmental Protection Agency's old logo (left) is being replaced by a new stylized logo (right), which will be phased in as the agency starts its ninth year of operation. The new logo was designed primarily because the old design was too similar to U.S. EPA's.

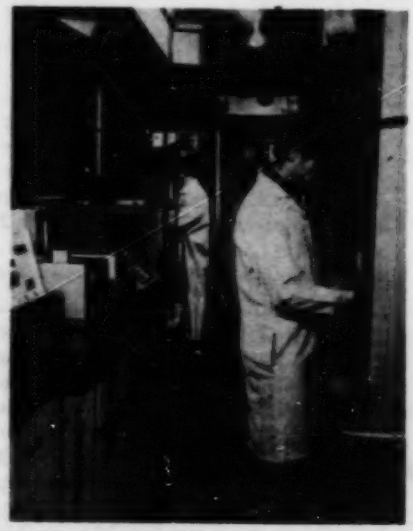


Mobile Lab to Analyze Hazardous Waste Dumps and Spills

The number of hazardous waste sites posing potentially serious health and environmental problems has been estimated by the EPA at 34,000. One of the major obstacles in cleaning up these sites has been the lack of sufficiently rapid analyses of the chemicals for proper disposal.

This need prompted the Oil and Hazardous Materials Spills Branch (OHMSB) of the Industrial Environmental Research Lab in Cincinnati, Ohio, to develop a Mobile Analytical Laboratory.

Designed in-house at the branch's location in Edison, New Jersey, specifically for handling toxic materials, the mobile lab is a 35-foot semi-trailer van equipped with all the benches, up-to-date lab instruments and safety devices needed to analyze chemicals from these hazardous dumps.


Inside of mobile lab.

By using this "lab on wheels," chemical analyses can be done on the site, not only to minimize the time and expense of transporting the materials to a laboratory somewhere, but also to enhance the communications between the cleanup coordinators and the analytical team.

Moving from site to site around the country the mobile lab is currently on the scene in Elizabeth, New Jersey, to assist the State and Region II in cleaning up the bankrupt industrial dumpsite once belonging to the Chemical Control Corp.

For more information on the mobile lab, contact Ira Wilder at (201) 321-6635.

briefs...briefs...briefs...briefs...briefs...briefs...briefs...

Chicago-area Gardeners Take Warning

No garden ever fertilized with Nu-Earth, a sludge by-product distributed free as fertilizer by the Chicago Metropolitan Sanitary District, should be used to grow vegetables unless soil testing shows it is not contaminated.

The EPA warns users that high levels of cadmium have been found in the fertilizer, and pose a potential health hazard.

Recent studies indicate that cadmium is linked to kidney disease and other health problems. It is especially dangerous when used on vegetables, because the cadmium is absorbed into the leaves of plants grown with the fertilizer.

EPA advises gardeners to have their soil tested professionally for total cadmium content if they want to use a Nu-Earth plot again. Levels of 2.5 per million are cause for concern.

New Federal Standards for New Power Plants

Final Federal air pollution standards for new coal-burning electric power plants have been announced by EPA. These final rules are substantially more stringent than the current standards and will permit greatly increased coal use without increasing national sulfur oxide and particulate emissions.

The rules will, in effect, require sulfur dioxide removal devices called scrubbers on all 350 new power plants expected to be built in the U.S. between now and 1995. The standards, however, do not preclude the use of new technologies that might be developed in the future.

Under the rules, all new plants must reduce uncontrolled sulfur dioxide emissions from 70 to 90 percent. The 90 percent requirement applies to any plant where uncontrolled emissions are more than 0.6 lbs. of SO_2 per million BTU. Plants with a controlled emission level less than this are permitted to reduce sulfur by less than 90 percent, but never less than 70 percent. Continous monitoring of emissions is also required.

This means that power plants burning higher sulfur coal will have to reduce uncontrolled sulfur dioxide emissions by 90 percent, and plants burning lower-sulfur coal would be subject to at least the 70 percent standard.

The new standard is designed to allow the country to move forward without disruption to fully develop coal resources while supplying energy growth needs and easing dependence on foreign oil.

For further information, contact Don R. Goodwin, Director, Emission Standards & Engineering Division (MD-13), U.S. EPA, Research Triangle Park, NC 27711, phone (919) 541-5271.

EPA Action to Increase Supply of Unleaded Gas

Enforcement of the current ban on the MMT gasoline additive has been suspended by EPA until October 1, 1979. This was done to increase supplies of unleaded gas this summer, and to minimize the problem of pollution-control catalysts on automobiles being damaged with leaded gas.

The reinstatement of MMT, an octane booster that allows more unleaded gas to be made from a barrel of oil, may result in 340,000 barrels of gas per day being shifted from leaded to unleaded.

The temporary measure should have a net air pollution control benefit by increasing supplies of unleaded gas, thereby reducing the pressure for drivers to switch to leaded gas.

New England Power Plant Switches to U.S. Coal

Following President Carter's recent energy address, EPA decided to allow the Brayton Point electric power plant in Somerset, Massachusetts, to convert from imported oil to domestic coal. The plant is the largest in the Nation and the first one in New England to switch voluntarily from oil to coal. The conversion will begin in 1982 and will be completed two years later. This move is expected to reduce New England's dependence on imported oil by 17 percent.

The facility serves southeastern Massachusetts, all of Rhode Island, and part of New Hampshire. It burns 12-14 million barrels of oil per year.

At Least 11 Midwest Urban Areas Will Require I & M Programs

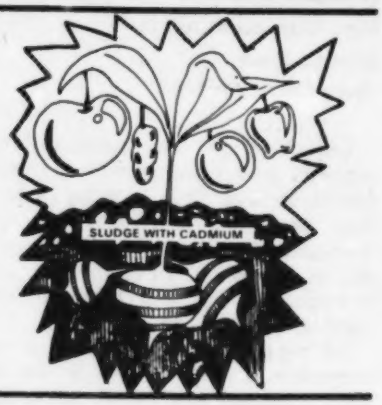
The Clean Air Act Amendments specify that vehicle emission inspection and maintenance programs (I/M) must be implemented in any urban area with serious auto pollution problems. The law indicates that any urban area receiving an extension beyond 1982 to meet the cleanup deadlines must have an I/M program in full operation no later than 1982. This means that most of the 104 major urban areas with more than 200,000 population must move expeditiously to set up I/M programs.

In the Midwest region, the following metropolitan areas, and perhaps others, will need to begin auto exhaust inspections: Cleveland, Cincinnati, Youngstown, Dayton, Ohio; Gary, Hammond, and the Louisville interstate area, Indiana; Chicago and East St. Louis, Illinois; Detroit, Michigan; and Milwaukee, Wisconsin.

Environmental news briefs...briefs...briefs briefs...

Lake Erie Gas Drilling Report Available

U.S. EPA and the U.S. Army Corps of Engineers are jointly funding an 18-month, three-phase study to determine what environmental impacts might result from drilling for natural gas under U.S. waters of Lake Erie. The Province of Ontario has produced commercially significant amounts of natural gas from beneath Lake Erie since the 1950s. If the study suggests that such drilling might be done in an environmentally acceptable manner, the two agencies will jointly develop policy and/or guidance for the potential new source of U.S. energy. Phase I of the project has produced "An Examination of Issues Related to U.S. Lake Erie Natural Gas Development." Copies of the 200-page technical report are available from Paul J. Horvatin, U.S. EPA Great Lakes National Program Office, 536 S. Clark St., Chicago, Il. 60605



EPA Takes Lead at Three Mile Island

The White House has designated the EPA as the lead agency for long-term radiation monitoring at the Three Mile Island nuclear plant site in Pennsylvania.

EPA will not only coordinate collection and documentation of radiation data obtained by all the Federal agencies involved, but will continue to maintain an operations center staffed with radiation specialists at the site, and inform the public through the Nuclear Regulatory Commission of off-site radiation levels. EPA will also prepare a report on environmental air and water-borne radioactivity for the Presidential Commission investigating the accident.

Second Recall of '79 Chevettes Ordered

For the second time in a month, EPA has ordered a recall of Chevettes for failure to meet emission standards.

EPA has told Chevrolet to recall 67,000 1979 Chevettes equiped with standard 1.6 litre engines and automatic transmissions, and also told GM it would have to halt production if it could not correct the defect during assembly.

The Chevettes were emitting about 29 percent more than the allowable 15 grams of carbon monoxide per mile.

The cars were made at plants in Wilmington, Del., and Lakewood, Ga. Chevrolet has announced that the cars to be recalled will be modified without charge to the customer.

Two Steel Companies Sign Pollution Cleanup Agreement

U.S. Steel and Crucible Steel Companies have signed an agreement with EPA to clean up air and water pollution around their respective plants.

U.S. Steel has agreed to spend $400 million to clean up emissions from its plants in western Pennsylvania and Utah. This is the largest environmental control agreement ever signed in the steel industry. Crucible will spend $50 million to clean up its plant near Pittsburgh.

Particulate emissions from U.S. Steel's Pittsburgh-area plants will be cut by 50 percent, or by 22,000 tons per year. Water pollutants— including cyanide, ammonia, oil, and greese — will be cut by 90 percent. Crucible's cleanup efforts will mean a 75 percent reduction in sulfur dioxide and particulate emissions.

Both agreements provide civil penalties: $18.6 million for U.S. Steel and $2 million for Crucible. Both companies, however, can offset the fines to a degree if they install pollution safeguards beyond those required by current regulations, or if they come into compliance sooner than the agreement calls for (1982).

EPA Aids Medical Personnel

A training program to improve the treatment of pesticide poisonings among migrant farmworkers is being given to health workers from rural clinics by EPA and the Health Services Administration (HSA) of the Department of Health, Education and Welfare.

EPA has developed educational materials and is holding a series of training sessions for doctors, nurses, and other medical personnel from HSA's rural clinics to assist them in recognizing and remedying pesticide-caused illness among farmworkers.

EPA will also maintain a toll-free phone number for HSA physicians to obtain medical advice in diagnosing and treating suspected pesticide-caused illness, and will analyze blood and urine samples for pesticide residues from field workers believed to have poisoning problems.

Copies of the EPA/HSA agreement are available from EPA, Human Effects Monitoring Branch (TS-769M), 401 M St., SW, Washington, DC, 20460. ATTN: Frank Davido.

First Man on Moon is First to Pass Auto Clean Air Test

Launching a new campaign to promote auto emission testing in the Cincinnati area, Neil Armstrong, former astronaut and professor of Aerospace Engineering at the University of Cincinnati, drove the first car through the city Vehicle Inspection Lane during Clean Air Week.

Having passed the tailpipe test at the inspection lane, Armstrong, as well as other motorists who do so during the summer months, will receive a special "Air Care Club" decal depicting a heart-shaped, clean and cloudy blue sky.

The "Care About the Air" promotion was funded by EPA Region V, to promote auto emission testing through public education. The campaign was run by the local Tri-State Air Committee.

The promotion will run through the summer "smog season" as a reminder to people that auto emission testing and better car maintenance is not only essential to better fuel economy, but also to life and breath.

NEIL ARMSTRONG (far right) watches as his vehicle goes through the Inspection Lane first on the opening day of Clean Air Week in Cincinnati.

Below: After successfully completing the safety inspection, Armstrong talks to reporters.

Wisconsin Awarded Waste Management Grant

A $513,290 grant has been awarded to the Wisconsin Department of Natural Resources by EPA, to set up a solid and hazardous waste management program.

The grant, funded through the Resource Conservation and Recovery Act of 1976, will provide the Federal share of a $1.4 million program for fiscal year 1979.

Funded activities include a Statewide inventory of open dumps, to provide the State with data on past and present waste disposal practices.

The grant will also provide funding for State solid waste planning and a hazardous waste management program.

In addition, part of the grant is earmarked for a public participation program, providing citizens with the opportunity to take part in the critical solid and hazardous waste decision facing Wisconsin.

Granger, Indiana, Contamination (story on page 5)

Renee Mueller, Chief Design Engineer at ERGO Industries, gets a blood test from Peter Bercz, hemotologist with EPA's Health Effects Research Lab in Cincinnati. Mueller had been exposed to the benzene contamination at ERGO daily as he showered after his morning jog. ERGO Industries is located in Granger, Indiana, where benzene contamination has been discovered in the water supply.

FEDERAL REGISTER

May 4, 1979b— Notices: Environmental statements; availability, etc.: Agency statements, weekly receipts. **Environmental Quality Council. Notices:** Meetings; Sunshine Act. **Equal Employment Opportunity Commission. Notices:** Meetings; Sunshine Act. **Federal Communications Commission. Notices:** Meetings; Sunshine Act. **Federal Energy Regulatory Commission. Rules:** Natural gas companies: Rate schedules and tariffs; research, development and demonstration projects. Natural Gas Policy Act of 1978: Prices, prescribed maximum lawful; May-July, 1979 compilation. **Notices:** Hearings, etc.: Alaska Power Administration. Colorado Interstate Gas Co. (2 documents). Columbia Gas Transmission Corp. Connecticut Valley Electric Co., Inc. Consolidated Gas Supply Corp. El Paso Natural Gas Co. Georgia Power Co. Kansas Power & Light Co. Michigan Wisconsin Pipe Line Co. Minnesota Power & Light Co. Natural Gas Pipeline Co. of America. Northern Natural Gas Co. Pennsylvania Power & Light Co. Public Service Co. of Oklahoma. Southeastern Power Administration (2 documents). Southern Natural Gas Co. (2 documents). Southwestern Power Administration (2 documents). Tennessee Gas Pipeline Co. Texas Eastern Transmission Corp. Meetings; Sunshine Act. Natural Gas Policy Act of 1979: Determination process reports receipts. **May 7, 1979 — Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: Louisiana; correction. Air quality implementation plans; delayed compliance orders: Alabama. Maine (2 documents). Pesticide chemicals in or on raw agricultural commodities: tolerances and exemptions, etc.: 4-Amino-6-(1,1dimethylethyl)-3-(methylthio)-1,2,4-triazin-5(4*H*)-one.**Proposed Rules:**Air pollution control, new motor vehicles and engines: Emission control system performance; warranty regulations; correction. Air quality implementation plans; approval and promulgation; various States, etc.: Illinois. Nevada. Air quality implementation plans; delayed compliance orders: Maine. Wyoming (2 documents). Pesticides; tolerances in animal feeds and human food: 4-Amino-6-(1,1-dimethylethyl)-3-(methylthio)-1,2,4-triazin-5(4*H*)-one. **Notices:** Air pollution; ambient air monitoring reference and equivalent methods applications, etc.: Bendix model 8101-B oxides of nitrogen and analyzer. Pesticide applicator certification and interim certification; State plans: Kentucky. Pesticide registration, cancellation, etc.: 2,4,5-T and Silvex; objections and request for hearing. Pesticides; experimental use permit applications: Chlorothalonil. 1-(8-Methoxy-4,8-dimethyl-nonyl)-4-(-methylethyl) benzene, etc. 2-(1,3,3-Trimethyluredio)-1,3,4-thiadiazole-5-N,N-dimethyl sulfonamide. Pesticides; tolerances in animal feeds and human food: Dow Chemical et al. **May 8, 1979 — Proposed Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: Massachusetts. Air quality implementation plans; delayed compliance orders: Indiana. Ohio (7 documents). New Jersey (2 documents). New York. **Notices:** Marine sanitation device standards: California. **Rules:** Air quality implementation plans; delayed compliance orders: Indiana (2 documents). Ohio (4 documents). Pennsylvania. **Proposed Rules:** Air programs; approval and promulgation; State plans for designated facilities and pollutants; Connecticut et al. Air quality implementation plans; approval and promulgation; various States, etc.: Alabama. Georgia. Montana. Pennsylvania. Toxic substances: Health effects; good laboratory practice standards. Health effects test standards. **Notices:** Meetings: Environmental Measurements Committee. Pesticide registration, cancellation, etc.: Ambush insecticide. Pesticides; emergency exemption applications: Compound 1080. Pesticides, experimental use permit applications: Diclofop-methyl, etc. n-Tetradecyl formate, etc. Pesticides; temporary tolerances: Methyl 2-[4-(2,4-dichlorophenoxy] propanoate. Pesticides registration, cancellation, etc.: Procyazine. Pesticides; tolerances in animal feeds, and human food: Shell Chemical Co. Toxic and hazardous substances control: Asbestos in buildings; denial of petition. **May 10, 1979 — Rules:** Air quality surveillance and data reporting. **May 11, 1979 — Rules:** Air quality implementation plans; delayed compliance orders: Connecticut. Kentucky Ocean dumping: Disposal site management criteria correction. Pesticide programs: Compensation for use of data in support of registration applications. Pesticide products; conditional registration; interim rules. **Proposed Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: Colorado. Hawaii. Virginia. Air pollution control, new motor vehicles and engines: Trucks and vehicles, light-duty; 1981-83 model years; high altitude emission standards and certification and testing procedures; advance notice. Toxic substances: Chlorofluoroalkanes, fully halogenated; use in aerosol propellants; relief to certain manufacturers of pyrethrin pesticides. **Notices:** Air quality implementation plans; approval and promulgation; various States, etc.: Montana; Northern Cheyenne Class I redesignation petition. Environmental statements; availability, etc.: Agency statements, weekly receipts. Meetings: Science Advisory Board. Pesticide registration applications; consideration of data by Administrator; interim policy statement withdrawn. Pesticide; temporary tolerances: Methly 2-[4-(2',4'-dichlorophenoxy)phenoxy]propanoate 3-Phenoxyphenylmethyl 4-chloro-O-(1-methylethyl)benzeneacetate. **May 14, 1979 — Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: Massachusetts. Water pollution; effluent guidelines for certain point source categories: Electroplating; interim rule; suspension. **Proposed Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: New York. New York; hearing. Air quality implementation plans; delayed compliance orders: North Carolina. **Notices:** Meetings: EPA/Industry bimonthly meeting, Ann Arbor, Mich,; changed date. Pesticide registration, cancellation, etc.: Biorational pesticides; policy statement and availability of background documents. POUNCE 3.2 EC. Pesticides; emergency exemption applications: Chlorpyrifos. Strychnine Sulphate. Trifluralin et al. Toxic and hazardous substances control: TSCA Interagency Testing Committee report to EPA; priority consideration chemicals for testing; EPA response to recommendations. Phoenix Steel Corp. **May 15, 1979 — Proposed Rules:** Air quality implementation plans; delayed compliance orders: Ohio. Waste management, solid: State plan development and implementation guidelines. **Notices:** Air pollutants, hazardous; National emission standards: Pennsylvania; authroity delegation for vinyl chloride. Toxic and hazardous substances control: Chemical substances; availability of initial inventory, etc. Premanufacturing notices; monthly status report. Premanufacturing notification requirements and review procedures; interim policy statement. **May 16, 1979 — Proposed Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: Massachusetts. Utah. Pesticide chemicals in or on *raw* agricultural commodities; tolerances and exemptions, etc.: Carbaryl. Sodium chlorate. **Notices:** Air quality implementation plans; approval and promulgation; Prevention of significant air quality deterioration (PSD); permit approvals (3 documents). Pesticide registration, cancellation, etc.: BIOMET 300. Pesticides, emergency exemption applications: Permethrin. Trifluralin. Vydate L. Pesticides; temporary tolerances: Chlorthiophos. Water pollution control: Toxic substances; water quality criteria; inquiry; correction. Water quality standards: State; adoptions and approvals. Ohio (3 documents). **May 18, 1979 — Rules:** Ocean dumping: New York Bight Apex; final designation of disposal sites. Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: *O,O*-diethyl *O*-(2-isoprophyl-6-methyl-4-pyrimidinyl) phosphorothioate. *O,O*-Dimethyl *S*-[(4-oxo-1,2,3-benzotriazin-3-(4*H*)-ylmethyl]phosphorodithioate. Linuron. **Proposed Rules:** Pesticide programs: State pesticide registration procedures; notification to Agriculture Secretary. **Notices:** Environmental statements; availability, etc.: Agency statements, weekly receipts. **May 21, 1979 — Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: Massachusetts. Air quality implementation plans; delayed compliance orders: Indiana. Minnesota. **Proposed Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: California. Florida. Idaho, Oregon, and Washington. Texas. Air quality implementation plans; delayed compliance orders: Alabama. Indiana-Kentucky Power Co.; hearing. **Notices:** Air pollution control: Arsenic; status decision and inquiry. Grants, State and local assistance: Wastewater treatment projects more stringent than secondary; program requirements memorandum. **Meetings:** Science Advisory Board. Noise pollution control: Light vehicles noise emission test procedure; availability of draft. Pesticide registration, cancellation, etc.: Pix Cotton Plant Regulator. Ortho Fence & Grass Edger. Pesticides; emergency exemption applications: Aldicarb. Asulox. Diclofop. Pesticides; temporary tolerances: Glyphosate. **May 22, 1979** — ***See also*** Interagency Regulatory Liaison Group for document relating to activities report of the Group. **Rules:** Air quality implementation plans; delayed compliance orders: Connecticut. **Notices:** Air pollution; standards of performance for new stationary sources: Kraft pulp mills; total reduced sulfur emissions; final guidelines availability.

JULY 9-11

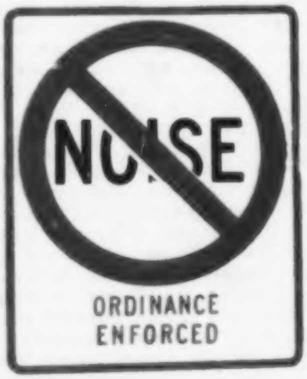
WASTEWATER TREATMENT PLANT OPERATION AND MAINTENANCE, sponsored by EPA. Will cover plant planning and funding, design, equipment selection, efficient operation, equipment and plant start-up. At the Hyatt Regency Hotel, Atlanta, Georgia. Contact Marilyn at the Wastewater Technical School, P.O. Box 370, **Neosho, MO** 64850, (417) 451-2786.

JULY 26-28

WASTE ALERT, sponsored by national public interest groups. Three-day workshop focusing on solid and hazardous waste management. Citizens, State officials, industry representatives, and technical experts will meet at the University of **Wisconsin, Madison** to examine programs under RCRA. To encourage public participation, promote cooperation between citizen groups, State agencies, and elected officials. Contact Mark Murray, American Public Health Association, 1015 18th St., NW, Washington, DC 20036 (202)467-5038.

AUGUST 13-17

ENVIRONMENTAL EDUCATION. To present ecological concepts leading to an understanding of wise environmental practices, receive first-hand experience in soils study, terrestrial and aquatic ecosystems, fish and game management. At Silver Lake College, Manitowoc, Wisconsin. Contact Edward Ehlert, 1115 N. 8th St., **Manitowoc, Wisconsin**, 54220. (414)684-3144.



Noise Sign Available

Camera-ready copies of EPA's Region V noise sign are now available to interested communities through the National League of Cities. The sign was designed by Region V in response to a request by the mayor of Galena, Illinois, to develop a comprehensive noise-control program for that city. The sign can be obtained by writing Horst Witschonke, Noise Program Office, 230 S. Dearborn St. Chicago, IL 60604. The telephone is (312) 353-2202.

Your Opinion?

Send us your ideas on Environment Midwest stories, and the environmental issues in your area. We want to hear from you.

As space permits, your comments will be included in the magazine.

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August 1979

EPA ENVIRONMENT MIDWEST

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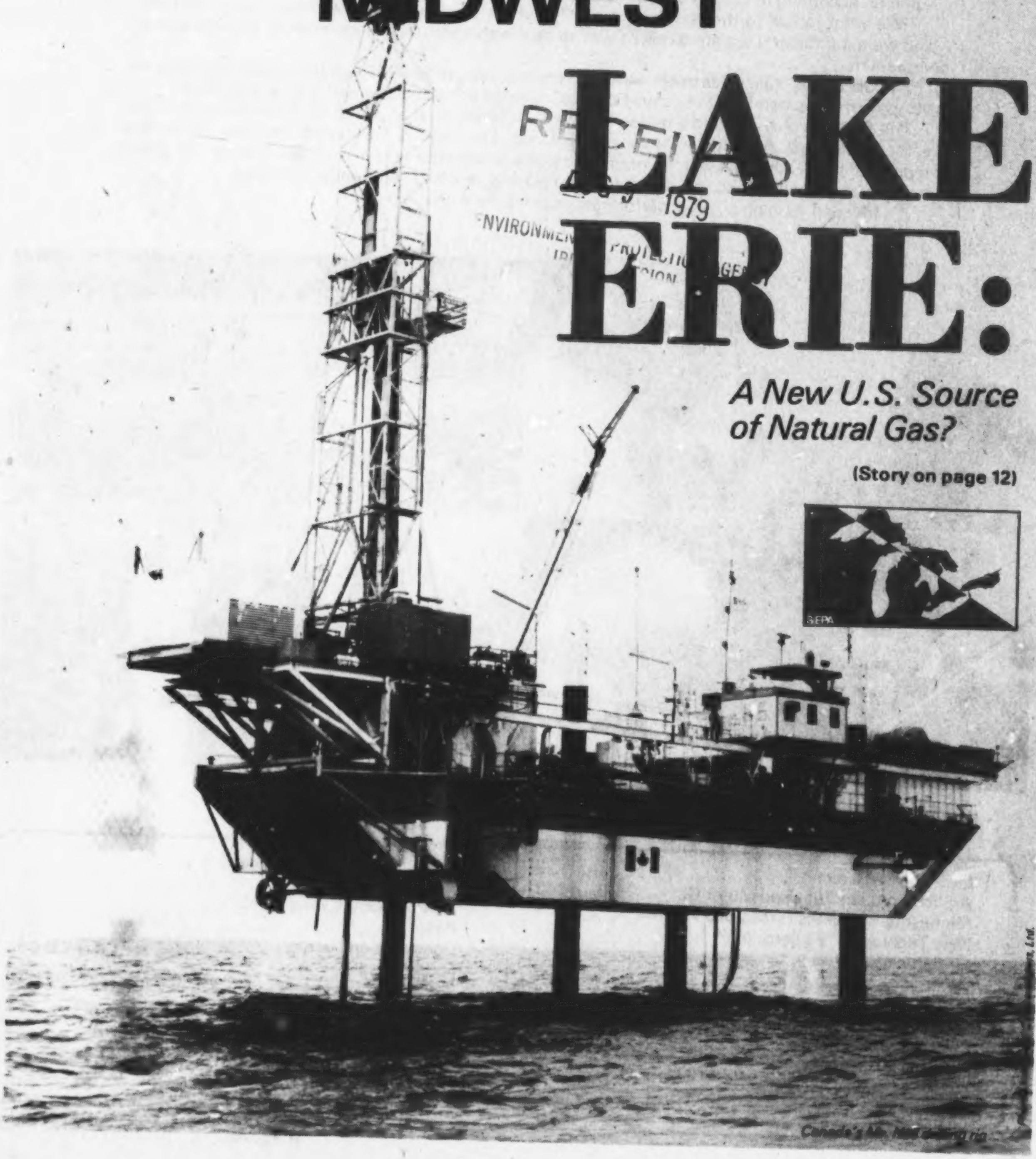
LAKE ERIE:

A New U.S. Source of Natural Gas?

(Story on page 12)



Canada's No. [illegible] drilling rig

148

LIVE! ON THE RIVER

A one-of-a-kind musical comedy program that looks at environment, energy growth, and development is playing cities and towns throughout the Ohio River Valley this summer.

"Live! On the River," produced by the Cincinnati Institute, with assistance from the Mead Johnson Foundation and EPA, will play over 70 performances in 35 river valley communities this summer, according to Project Director Bob Robbins.

"We want to talk to the people of the valley about their future and heritage," says Robbins," and we think the arts are an excellent way to deal with tough issues like energy, growth, and environment.

The Ohio River Valley has been identified recently as a prime candidate for expanded energy development in the coming years, says Robbins, as well a as major source of U.S. air pollution.

The show revolves around a hot-shot New York film crew that comes to the community to get some grass roots input for a TV special on rivers. The show is interrupted by Mark Twain (the reports of his death again exaggerated), and some good-natured give and take ensues. The show features traditional folk songs, dancing, fiddle playing, and original Broadway music.

It's free and, judging by early performances, a real hit with the public.

EPA Photo: Frank Corrado

EPA Photos/Leah Wilson

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A Slick Solution For Used Motor Oil

by Marjorie Borchard

Used motor oil—that dirty, slimy black stuff you drain out of your car's crankcase. What do you do with it?

Many States are hoping you'll recycle your used motor oil. Currently, 18 States have used-oil recycling programs, although the programs vary somewhat from State to State. While some States have legislation regarding the recycling of oil, others conduct their programs on a voluntary basis. Some States have one or two oil refiners or reprocessers; others have haulers who sell the oil without refining it.

But the important point is that used motor oil can be recycled, virtually forever. As the Association of Petroleum Refiners says, "Lubricating oil never wears out—it just gets dirty!" Not only does recycling motor oil keep it out of the ground and water, but it also reuses a valuable resource. With rising prices and current shortages of oil, it makes sense to recycle all the oil we can.

Just how much oil is out there, available for recycling? According to the American Petroleum Institute (API), about 190 million gallons of oil is generated each year by do-it-yourselfers who change their own motor oil. While some of this oil is recycled—either through re-refining or through use as a fuel or lubricant—most of it is dumped in sewers, in driveways, in trash cans, or even in the neighbor's backyard. Each year, as more and more people decide to change their own motor oil, this amount of used, potentially recyclable oil will increase.

Re-refined oil can be just as good as new oil, and even the API agrees. In Germany, where a government subsidized oil recycling program recovers 70 percent of the used motor oil, each new Mercedes-Benz contains re-refined oil. In Minnesota, the State's only re-refiner has used the stuff in his Lincoln Continental for years and swears by it.

MPCA Photo/Marjorie Borchard

State law and a public education program team up in Minnesota to give old oil new life

Minnesota law requires all retailers who sell motor oil to either provide a collection tank for the deposit and collection of used oil, or to post a notice indicating the nearest oil collection site.

Although there is no exact count on the number of used-oil collection sites in Minnesota, they can generally be found at most service stations that change oil, at discount stores, at suburban shopping malls, and at multi-material recycling centers. There are also a number of State and city government garages that provide oil collection sites for the public.

The used oil is then picked up by the State's 15 private oil haulers for fuel or lubricating purposes. In Minnesota, a large portion of the collected oil is used to lubricate railroad or farm machinery. Although little oil is re-refined for sale to motorists in Minnesota, this is a growing trend in many other States.

The Minnesota Pollution Control Agency (MPCA) has promoted an education program to encourage the public to recycle their used oil. Recently, the MPCA used TV news coverage and newspaper articles to pubicize the program, which resulted in over 200 telephone calls from citizens with questions about oil collection sites. Many people said they were glad to hear about the program, as they had been saving their old oil and didn't know what to do with it.

Besides Minnesota, two other EPA Region V States—Illinois and Michigan—have statewide motor oil recycling programs. A fourth, Indiana, plans to begin such a program this month. Ohio and Wisconsin do not have State-sponsored recycling programs, although some private recycling does occur there.

For more information on used oil recycling, please contact Marjorie Borchard, Minnesota Pollution Control Agency, (612) 296-7294.

Marjorie Borchard is a Public Information Officer with the Minnesota Pollution Control Agency.

getting hazardous wastes in hand

Minnesota Regulates

After three years of study, public hearings, and considerable input from industry and environmental groups, Minnesota's comprehensive hazardous waste regulations came into effect on June 16.

Thus Minnesota has joined about a dozen other States with regulations on the books that come to grips with the management of hazardous wastes — ranging from oil and paint wastes to cyanide and polychlorinated biphenyls (PCBs).

Minnesota's regulations are designed to monitor and control hazardous wastes by giving complete "cradle to grave" responsibility to the generators of such wastes, subject to review by the Minnesota Pollution Control Agency (MPCA). This means that it is up to the waste generator to ensure that its wastes are transported, stored,and ultimately delivered to a permitted processisng or disposal facility.

One of the key provisions of the new regulations is the requirement that industries submit detailed disclousure forms describing all hazardous wastes they generate. This information is vital to MPCA for the development of a long-term hazardous waste management plan for the State.

"Until now, there has been no uniform, in-depth method to gather information on exactly how much and what type of hazardous wastes exist in Minnesota," said Marjorie Borchard, Public Information Officer with MPCA. "All we knew is that in Minnesota, as elsewhere in the country, chemicals were being dumped illegally, causing pollution of the surrounding land, water, and air," she said.

Once hazardous wastes are identified, proper containers and labelings must be used, according to the new regulations. Each container of waste requires shipping papers to accompany it from the location where the waste is generated, through the shipping process, and then to the waste's final disposal point. Shipping papers also include instructions on what to do in case of a spill.

"Each year, Minnesota industries produce an estimated 128,000 tons of hazardous wastes," said Borchard. "Some of these dangerous materials are properly disposed of, but MPCA is unable to determine where 57 percent of these wastes end up. It can be safely assumed that each year thousands of tons are illegally dumped into sewers, lakes, rivers, and into the ground."

The new Minnesota regulations require industries to dispose of their hazardous wastes at a permitted facility. "Aside from a few private industry sites, there are currently no permitted hazardous waste disposal or processing sites in the State. Those that exist are owned by a few oil refiners. Plus, there are two large onsite facilities: one owned and used exclusively by the 3M Company, and the other by the Federal Cartridge Company," Bochard said. Nearly 16 percent of Minnesota's hazardous wastes is shipped to other States, such as Illinois, she said.

The regulations create an incentive for private industry to develop safe, permitted hazardous waste management sites, MPCA said. In addition, they are also expected to cause a reduction in hazardous waste generation.

"Since the new regulations require industry to bear long-term liability for improper disposal, it will eventually become more economical to find ways to reduce or recycle hazardous wastes whenever possible," Borchard said.

The MPCA staff has planned a series of workshops and meetings with industry representatives, to launch a cooperative effort of managing the State's hazardous wastes. MPCA will

> **"Each year, Minnesota industries produce an estimated 128,000 tons of hazardous waste...each year thousands of tons are illegally dumped into sewers, lakes, rivers, and into the ground."**

"Cradle to Grave" Concept Introduced

Hazardous

work with industries to gather information needed to properly plan for the treatment, recycling or disposal of these wastes, and to assess training needs for hazardous waste handlers and transporters.

States which do not develop hazardous waste regulations that are at least as stringent as upcoming Federal rules,will have their hazardous wastes managed directly by EPA.

The proposed EPA regulations will govern wastes that are determined to be either corrosive, carcinogenic, flammable, explosive or otherwise harmful to human health or to the environment. A by-product of many manufacturing processes, hazardous wastes are created by the production of such diverse items as telephones, TV sets, books, automoblies, newspapers, clothes, and processed foods.

EPA has been providing grant support and technical assistance for several years to help MPCA in the development of these new regulations.

Information for this article was provided by the Minnesota Pollution Control Agency (MPCA).

Open-air dumps containing hazardous wastes, such as at PCI in Shakopee, near Minneapolis (above), and at Arrowhead Refining in Duluth (below), present a danger to health and the enviroment. They are constant eyesores as well.

New Technique "Fingerprints" Air Particles

By R. John Rapsys

What fingerprinting of people has done for crime detection, "fingerprinting" of air particles now promises to do the same for pinpointing the often elusive sources of air pollution.

A new technique, known as Suspended Particle Evaluation and Classification (SPEC), identifies the individual air particle and — more important — tells where that particle came from: an electric generating plant, quarry, steel mill, or any other source.

"The bottom line is effective control of air pollution," said Edward Fasiska, president of Material Consultants & Laboratories (MCL). "But first comes source identification — we must know where all that pollution is coming frrom."

Fasiska founded MCL in Monroeville, Pa., nine years ago and personally conceived the idea of "fingerprinting" air particles. But to turn the idea into an effective technique, he needed help. Luckily, help was readily available at the U.S. Steel Research Laboratory nearby. He teamed up with Dr. Richard Lee of U.S. Steel to develop the technology that evolved into SPEC.

Fasiska, who has a Ph.D. in crystallography, went to the Allegheny County Bureau of Air Control about a year ago and applied the SPEC technique for the first time. In that study he found to his surprise that air pollution in Allegheny County came mostly from dust particles rather than industrial sources, as he first suspected.

All told, Fasiska completed about 100 environmental studies, helping small businesses in the Pittsburgh area, including helping the City of Pittsburgh with the State Implementation Plan for clean air. It has been presumed that most air pollution comes from industry sources, said Fasiska. But, as his SPEC technique demonstrated, Fasiska found that only about half of the total air pollution came from local industry. The other half came from such non-point sources as road dust or agricultural soil particles.

The SPEC "fingerprinting" technique consists of identifying thousands of air particles, one by one. Size, shape, chemical, and other characteristics are then stored into computers for ready reference. Two types of air samples are collected on filter media, or thin sheets of film: one comes from the surrounding air of a region, the other from a suspected source of pollution. By matching the characteristics of the two samples, scientists can tell what pollutants are in the air, where they come from, and how much pollution comes from the suspected source.

To identify the air particles, the SPEC technique uses a scanning electron microscope, an X-ray fluorescent chemical analyzer and an X-ray defractor, plus two computers. With these tools, scientists are able to identify, or "fingerprint," air particles, even those invisible to the naked eye.

Robert K. Stevens, chief of the inorganic pollutant analysis branch at EPA's laboratory in Research Triangle Park, N.C., said: "EPA's major thrust is toward quantitative analysis — to identify as many sources of pollution as possible. In that respect, the SPEC technique certainly helps.

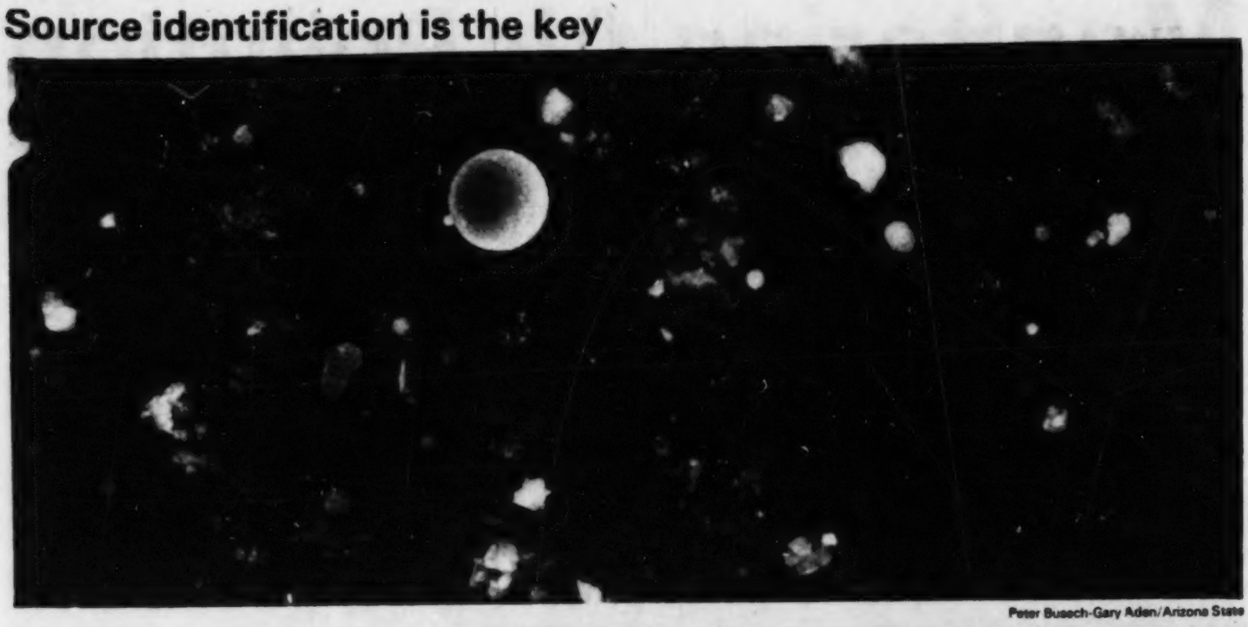
"With SPEC," he said, "we are not jumping off into the dark when we say that in a certain area 10 to 20 percent of air pollution comes from auto exhaust, 10 to 40 percent from combustion of fossil fuels (coal, oil), and the balance from a combination of industrial, agricultural, and natural sources, such as windblown dust." But he added, "No single technique can be expected to do all things; there has to be a combination of analytical methods." There must also be a change in the sampling method, he said. "We must have a lot more air samples to look at."

Up to now, EPA has been using the bulk analysis technique for identifying pollutants in the air. However, this technique needs to be modified, Stevens said, so that an air sample may be collected and analyzed directly by the scanning electron microscope and other instruments right on the filter. This is different from the SPEC technique, which requires the transfer of the air sample from one filter to another, Stevens explained.

The idea, he said, is to use both the SPEC technique and the bulk analysis technique, so that they could complement each other.

Fasiska's laboratory (MCL) presented the new SPEC technique at an EPA seminar earlier this year. "The unique thing about SPEC is that it's an automated procedure capable of analyzing hundreds of air samples instead of the usual two or three,"

Source identification is the key



Peter Buseck-Gary Aden/Arizona State

said Stevens. The laboratory is not under EPA contract now, but MCL hopes to get one within the next year or so.

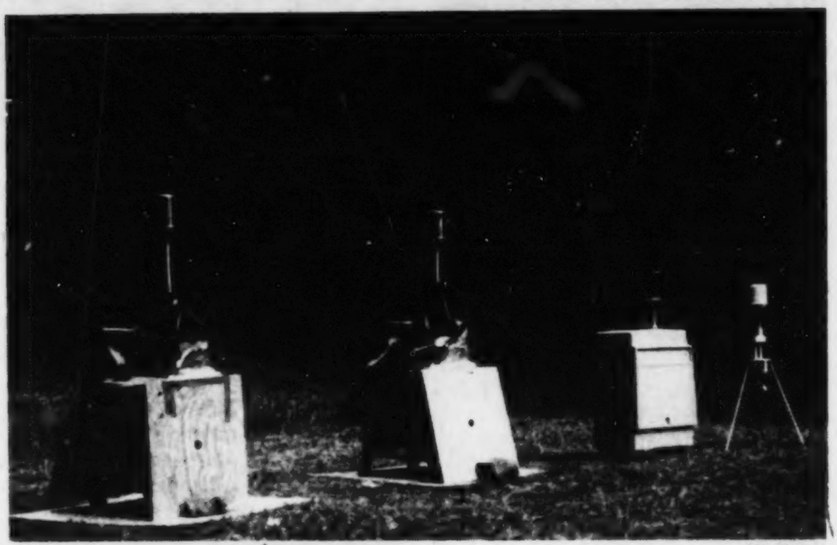
Besides having been used in the Pittsburgh area, the SPEC technique is scheduled to analyze air pollution around Philadelphia, Denver, Huston, and Champaign, Ill. Here, too, dichotomous (two-part) samples will be taken: one from the general air, one from a suspected pollution source.

"Once we receive the air samples, we'll be able to identify sources of urban and nonurban pollution right here in North Carolina, without actually going to the areas concerned," said Stevens.

Initially, all air samples will come to Research Triangle Park in North Carolina. They will then be sent to Fasiska's laboratory or similar ones for subsequent analysis, Stevens said.

"By 1980-81, we will probably be analyzing air samples from urban areas all across the country," he said. "By then, it should be possible to trace many — if not all — sources of pollution, especially those particulates that stay suspended in the air for many hours."

The SPEC technique promises to benefit the industry as well, said Fasiska. Industry has spent money on pollution controls that have not always worked perfectly, but with information from SPEC, companies will now be able to allocate their pollution control funds much more effectively, he said.



EPA Photos

Moonlike surface (top) is actually a greatly enlarged coarse air particle fraction. Each air particle has a unique composition that helps identify its source. Three automated and one manual dichotomous samplers (above) were used by EPA to study sources of air pollution in the Smoky Mountains. EPA scientist Robert K. Stevens (left) with an X-ray fluorescence instrument used to analyze air particles.

R. John Rapsys is a writer with EPA Region V and editor of Environment Midwest.

Cartoon: Bob Nagel

Monitoring Air Pollution

PSI aims at a common denominator

By Kent Kozina

Henry Hartmann recently had open heart surgery. His doctor told him that from now on, ozone is one of his biggest enemies, and that he should avoid it whenever possible. Hartmann's wife has respiratory problems which become aggravated whenever ozone levels are high.

The Hartmanns live about 10 miles north of a major Midwestern city, in an area frequently recording ozone levels twice the national health standard. The hartmanns want the most up-to-date information they can find on ozone levels in their community.

The city reports ozone levels hourly by means of a recorded message, which gives the latest measured concentrations of ozone in parts per billion parts of air; it also gives the level of the mann first listened to the message, however, it left him confused.

"I found the report very interesting," Hartmann said, "but I didn't know what all of it meant. If the reporter levels are half the standard, for example, should I just take it easy when I go outside, or should I jump in the car and get out of town?"

Hartmann is one of milions of Americans suffering from cardiovascular disease. His wife is one of an estimated 10 million Americans with asthma, chronic bronchitis, or emphysema. These people are especially susceptible to the five major air pollutants: sulfur dioxide, suspended particulates (dust), nitrogen dioxide, carbon monoxide, and ozone. They can perhaps benefit most from accurate and understandable air quality information.

Many air pollution monitoring agencies use an air reporting system which distills the technical measurements for several of the pollutants into a single number, or index. The index number corresponds to a general description of the air quality for that day, such as "good", "fair", or "poor."

This has the benefit of interpreting pollution measurements for those, like Hartmann, who don't yet understand how various levels of pollution can affect their health.

In 1975, the Council on Environmental Quality (CEQ) and the U.S. Environmental Protection Agency (EPA) surveyed the 55 largest air pollution control agencies in the U.S. and Canada. Thirty-three of those agencies reported air quality levels with some form of index — but no two were exactly alike.

An index number of 100, for example, could mean anything from "unsatisfactory" air quality in Minneapolis, Minnesota, to "severe air pollution" in Phoenix, Arizona, depending upon the index calculation method and the pollutants reported. In all the joint CEQ/EPA survey found 44 different descriptive words and 14 different index calculation methods in use nationwide.

consistencies among the different reporting methods, the survey recommended a standardized air pollution reporting method which would meaningfully relate urban air pollution levels to the public health.

Based on that recommendation, EPA announced this spring new rules for such a standardized nationwide reporting system, known as the Pollutant Standards Index (PSI).

According to the new rules, authorized by Section 319 of the 1977 Clean Air Act Amendments, the PSI must be used in all urban areas with more than 500,000 population by 1981; areas with more than 200,000 population must use the PSI by 1983.

The PSI works basically like this: Each daily measured concentration of each of the five major air pollutants is divided by the short-term national health standard for that pollutant, yielding an index value for each pollutant. The PSI is then reported as the maximum of these values.

Local newpapers, radio, and

INDEX VALUE	AIR QUALITY EPISODE LEVEL	OZONE LEVELS (1-hour), ppm	HEALTH EFFECT DESCRIPTOR	GENERAL HEALTH EFFECTS	CAUTIONARY STATEMENTS
500	SIGNIFICANT HARM	.60	HAZARDOUS	Premature death of ill and elderly. Healthy people will experience adverse symptoms that affect their normal activity.	All persons should remain indoors, keeping windows and doors closed. All persons should minimize physical exertion and avoid traffic.
400	EMERGENCY	.50		Premature onset of certain diseases in addition to significant aggravation of symptoms and decreased exercise tolerance in healthy persons.	Elderly and persons with existing diseases should stay indoors and avoid physical exertion. General population should avoid outdoor activity.
300	WARNING	.40	VERY UNHEALTHFUL	Significant aggravations of symptoms and decreased exercise tolerance in persons with heart or lung disease, with widespread symptoms in the healthy population.	Elderly and persons with existing heart or lung disease should stay indoors and reduce physical activity.
200	ALERT	.20	UNHEALTHFUL	Mild aggravation of symptoms in susceptible persons, with irritation symptoms in the healthy population.	Persons with existing heart or respiratory ailments should reduce physical exertion and outdoor activity.
100	NATIONAL HEALTH STANDARDS	.12	MODERATE		
50	50% OF HEALTH STANDARDS	.06	GOOD		
0		0			

ppm = parts per million

COMPARISON OF PSI VALUES WITH OZONE CONCENTRATIONS, DESCRIPTOR WORDS, GENERALIZED HEALTH EFFECTS, AND CAUTIONARY STATEMENTS

television stations pick up this air quality information and include it in their weather reports. Some air pollution agencies, like the one in Chicago, report more frequently via taped phone messages.

At at minimum, the PSI report includes the geographic area monitored, the pollutant with the highest measured concentration within the previous reporting period, the PSI number (from 1 to 500), and a description of air quality which corresponds to the PSI number. When more than one of the five major pollutants violates the national health standards, each pollutant is reported.

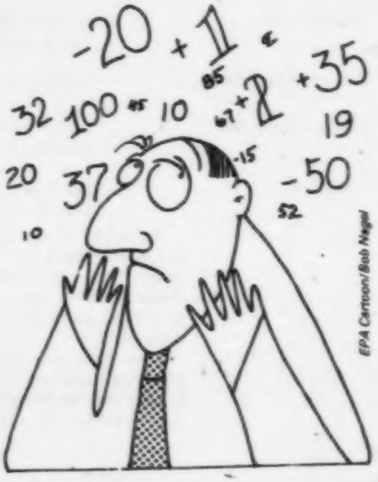
A typical report might contain the following statement: "Today's air quality index is 120, which is regarded as unhealthful. The responsible pollutant is ozone. This report represents conditions prevailing over most of the suburban north side area for the previous 24-hour period ending at noon today." If the index were forecast for the next day, the following additional language might also be used: "The current forecast is for improved air quality tomorrow with the index not expected to exceed 80."

According to Wayne Ott of EPA's Office of Research and Development, the public's response to the index has been good. Ott, who was instrumental in development of the PSI, said some agencies nonetheless have been reluctant to use the index.

"Many agencies are afraid that if they say the word 'unhealthful,' the world will end," said Ott. "When the PSI was presented in Mexico City, for example, the local agency said it could never do this, because if it said 'unhealthful' on the public airwaves, everyone would commit suicide. When they tried it, however, they discovered it was no problem at all."

In the Midwest, all major cities wih a population of more than 500,000 now use the PSI, except for Minneapolis-St. Paul and Chicago. According to spokesmen for the two State air pollution control agencies, Illinois will implement the PSI system statewide by January 1980, and Minneapolis will start using it before the January 1981 deadline.

With the PSI in widespread use, persons sensitive to air pollution can easily interpret the effect of daily changes in air quality on their health, whether they are in Los Angeles or New York City. And with clearer information, citizens can more easily monitor their city's progress in the fight for cleaner air.



EPA Cartoon/Bob Nagel

LETTERS

Dear Editor:

Usually, I am thoroughly impressed with the quality of work evidenced in the magazine, and appreciate the interesting style in which it is conveyed.

However, I feel compelled to respond to two small news items that appeared on page 19 of the June 1979 edition. In particular, the first news item referring to the Flambeau Mining case has several inaccurate statements:

1. The out-of-court settlement "will delay development of a copper mine." This is not true. The mining company, a wholly owned subsidiary of Kennecott Copper Corporation (which fact is important), had determined some time ago that it would not be mining in Wisconsin because of the current low market price for copper. The court case had nothing to do with that decision.
2. New mining legislation passed last year by the State legislature precludes any mining permits in the State until rules are promulgated by the State agency to carry out the new law. Again, entirely unrelated to the court case.
3. The company will "apply for new permits," as the article states, but not as a result of the court settlement; rather, because its prior permit application was dismissed by a State hearing examiner, which decision was affirmed by a circuit court.
4. The statement that the company "will prepare a new environmental impact statement" is, again, totally untrue and would lead the readers to believe that applicants prepare EISs. Now, as a practical but illegal matter, that may be true in some instances; as a general statement of the law, clearly the EIS responsibility lies with the agency.

The sixth news item concerns the 7th Circuit Court decision regarding the Milwaukee Metropolitan Sewerage District mess:

1. The 7th Circuit did not rule that the city "does not have to embark on a multi-million dollar program to upgrade its sewage treatment system." Quite the contrary. All but one of the lower court's orders were vigorously upheld.
2. You mention that the case was brought by the State of Illinois and was joined by the State of Wisconsin, implying that both States were on the same side. Again, this is totally untrue. Credit should go where it is due, to Illinois, and not to the State of Wisconsin, which intervened on the side of the City of Milwaukee and fought the Federal court decision. (Note also that if the State of Wisconsin had enforced the applicable water laws in Milwaukee for the past eight years, the State of Illinois might not have had to go to court and litigate for five years.)

Kathleen M. Falk
General Counsel
Wisconsin's Environmental Decade

What do you think of the articles appearing in Environment Midwest? What kind of articles would you like to see? Do you know something about local environmental issues that we might not be aware of? Send us your comments, ideas, and suggestions. As space permits, we'll include your comments in the "Letters" column.

—The Editor

FINDINGS OF NO SIGNIFICANT IMPACT

Project Location	Estimated Project Cost	Potential EPA Share
Delphos, OH	Design $392,350 Construction $4,095,250	Design $294,263 Construction $3,071,437
Galesburg San. Distr., IL	Construction $642,000	Construction $481,500
Cottage Grove, WI	Design $82,800 Construction $542,000	$468,600
Carmel, IN	Design $13,980 Construction $136,400	Design $10,485 Construction $102,300

A Finding of No Significant Impact (FNSI) is a notification to the public, prior to the grant award, that EPA believes the project's environmental impacts are not significant and that, as a result, an Environmental Impact Statement is not needed.

If you have comments or questions regarding the above projects, contact Eugene Chaiken, Chief, Facilities Planning Branch at EPA Region V offices in Chicago (312) 353-2124.

OFF THE PRESS

Environmental Hotline '79. The 7-page guide, published by EPA Region V, lists telephone numbers for environmental emergencies, names and phones of key EPA Region V personnel, EPA and other Federal agencies, Regional commissions, State and local government agencies, citizen and environmental groups, colleges and universities. For easy reference, information is grouped under six Region V States: Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin. Available free from U.S. EPA Region V, Office of Public Affairs, 230 S. Dearborn St., Chicago, IL 60604.

Around The Region...News...News...News...News

ILLINOIS

•By a vote of 77 to 69, the House rejected a bill that would have banned the shipment of **spent nuclear wastes** into the State for storage.

•"Illinois is becoming the nuclear garbage dump of the Nation," said **Sen. Charles Percy (R)** as he registered his opposition against Federal takeover of the General Electric nuclear waste storage facility near Morris.

• One man was killed and 18 others hospitalized when toxic fumes escaped from a leaking chlorine storage cylinder at a smelter plant in **East Alton**.

•The Senate passed a **hazardous waste disposal bill** by a vote of 49 to 2. Two sets of restrictions on the location of hazardous waste landfills were approved by the General Assembly and sent to the Governor. Although similar in most respects, the Senate bill also requires the investigation of alternate disposal methods and gives county boards **veto power** over landfill sites.

INDIANA

•A survey by the Department of Natural Resources shows that since 1907 man has filled in 3,688 acres of land along the Indiana shore of **Lake Michigan**.

•U.S. Army Corps of Engineers approved a new port complex on the Indiana shore of the Ohio River, east of **Jeffersonville**. Dredging of the Ohio to make room for barge anchorages was also authorized.

•Sludge from sewage treatment is no longer available to the residents of **Hammond**. The sludge, commonly used as garden fertilizer, showed traces of cadmium and lead. Not enough to cause harm, but "we don't want to take a chance," officials said.

•Indiana University is conducting a $60,000 State-funded study of **Cedar Lake** to see if the lake can be restored. More than 80 percent of the residents approved some kind of effort to save the lake. The study should be completed by November.

•The Indiana Stream Pollution Control Board approved the construction of a 42-inch sewer line between **Merrillville and Gary**. The board requested a $7.6 million grant from EPA to cover 75 percent of construction costs. By 1981, the new line is expected to carry more than twice the 4.2 million gallons of sewage the district is handling now.

OHIO

•Ohio EPA signed an agreement with U.S. EPA to improve the coordination and control of environmental incidents involving **pesticides**. The State will report all pesticide incidents to U.S. EPA, which will provide technical assistance, pesticide analysis data, and help with pesticide safety educational programs.

•Disposal of **nuclear wastes** in the State will not be authorized before January 1, 1983, according to a bill passed by the Senate and sent to the House. Salt, limestone, and shale deposits have been considered as possible disposal sites. In the meantime, the State will study the disposal problem to see if the ban should be extended past 1983,

•The City of **Columbus** must undergo an environmental review by the Ohio Power Siting Commission before the city can build an $118 million trash- and coal-fired power plant. This ruling by the Franklin County Court of Appeals last year was recently upheld by the Ohio Supreme Court.

MICHIGAN

•The controversial **wetlands protection bill**, in a 25 to 8 vote, was finally passed by the Senate and sent to the House. The bill applies to wetlands of five acres or more and carries two maximum penalties: $10,000 for development with out a permit and $25,000 for violating a permit.

• Michigan's 2,232-mile **Great Lakes shoreline** will get a face-lift with the help of $647,000 in Federal grants. A 12-month program was started in July to restore neglected or unused beaches, public parks, and historical sites.

•**Macomb County** will spend $35.6 million to modernize its wastewater treatment facility, which will include 12 miles of new connecting sewers and pumping stations. The project is expected to clean up more thoroughly the wastewater going into Lake St. Clair. It will also prevent basement flooding in **northern St. Clair Shores** and offer some relief from flooding to **Roseville** and **East Detroit**.

•By a vote of 98 to 0, the House passed a **hazardous waste management bill** and sent it to the Senate. One provision calls for a nine-member committee that would have power to approve or disapprove requests to establish hazardous waste dump sites. **Maximum fines** of $25,000 per day for first offenders and $50,000 per day for repeat offenders are provided.

MINNESOTA

•Minneapolis-St. Paul are chief suspects in a joint **Minnesota-Wisconsin** study to determine if air pollution from the Twin Cities steals across the Wisconsin border. And if it does, how far into Wisconsin does it reach? Data monitoring stations set up in Minnesota (Hastings, Roseville, East Bethel, Dayton and Anoka County) will be compared with data from similar stations on Wisconsin's side (at East Farmington and Park Falls).

WISCONSIN

•U.S. Soil Conservation Service study of land use says **62 million tons** of Wisconsin soil are being washed away each year. Two-thirds of such soil is from cropland.

•A ban on laundry detergents with more than one-half of 1 percent of phosphorus by weight became effective on July 1.

•A statewide poll shows that **76 percent** of the residents want to halt or at least delay the construction of nuclear power plants. Pennsylvania's Three Mile Island nuclear accident triggered the $3,000 study.

•The Fox River Valley Water Quality Planning Agency approved steps leading to clean up of waters in the area. However, it warned that the cleanup might increase the presence of **sea lampreys**, which destroy game fish. Native lampreys have been moving upstream in the Fox River, and there is concern that sea lampreys might follow. Both kinds of lampreys do not thrive in heavily polluted waters.

•The Southeastern Wisconsin Regional Planning Commission unanimously adopted the areawide water quality management (208) plan and presented it to the Wisconsin Department of Natural Resources at its July 25-26 board meeting.

LAKE ER

By Susan Nelson

It is not news that there are deposits of natural gas beneath Lake Erie. Canadian rigs began drilling for and extracting it early in this century,and they began in earnest to withdraw significant amounts of natural gas during the 1950s.

What is news, especially during the energy crisis, is a cooperative study by EPA, the Army Corps of Engineers (COE), and the Department of Energy (DOE) that began quietly last year. Its purpose is to take a careful, thorough look at environmental and economic issues involved in drilling for natural gas before any more exploration occurs beneath U.S. waters of Lake Erie. (An invisible line stretches across the Lake — see map — and forms the U.S.-Canadian boundary)

Officially called "Assessment of the Development of Natural Gas in U.S. Lake Erie," the study began last September and is scheduled to last 18 months.COE and EPA are funding the study, which is divided into three phases. Phase I ended in March; a194-page report, "An Examination of Issues Related to U.S. Lake Erie Natural Gas Development," has been prepared as a result. (To receive a copy, write to Paul J. Horvatin, U.S. EPA Great Lakes National Program Office, 536 S. Clark St., Chicago, IL 60605.)

A drill bit used for natural-gas exploration, shown approximately one-quarter size.

Argonne National Laboratory

Phase II of the project is now in progress. It is a 6-month field study to assess the environmental impacts such drilling could be expected to have upon Erie, the shallowest and most troubled of the five Great Lakes. This phase is being conducted by specialists from Argonne National Laboratory, a DOE facility. EPA specialists from the Great Lakes National Program Office in EPA Region V, Chicago, and specialists from COE's Buffalo, N.Y. district are keeping in close contact in order to draw their own conclusions.

An Environmental Impact Statement (EIS), prepared by the COE, will result from Phase II. EPA will draw up guidelines based on the EIS. These guidelines will govern development that does occur, should environmental studies now under way suggest that natural gas development in U.S. Lake Erie can be carried out without environmental danger. COE will use the EIS in its imminent job of deciding whether or not to grant construction permits.Public hearings will be held when the EIS is completed. Arrangements will be announced when they have been made.

The study is significant because it is being done before an immediate need for it exists. Although drilling is permitted by New York, Ohio, and Pennsylvania (where limited exploration has taken place), no one may drill for gas beneath Lake Erie until after the EIS and guidelines are ready. At this writing, no companies have applied for licenses to exploit for gas beneath Lake Erie on the U.S. side. If any should, they will require to await the results of the 18-month study.

In other words, there cannot be any drilling before mid-1980, and its doubtful that any U.S. Lake Erie gas would enter the market until after that time.

The study is also significant because it is not limited only to the three U.S. Government agencies. It also involves cooperation fron Canada, which shares cleanup of and concern for the Great Lakes with the U.S. The international Joint Commission (IJC), the binational body that oversees cleanup, in 1970 advised against drilling for natural gas in the eastern section of Lake Erie, east of a north-south line extending from Point Pelee, Ontario, to Marblehead, Ohio. The lake botttom east of that line is considered too unstable for such exploration — and too likely to produce oil, which would be a serious new source of pollution to drinking water for millions of people.

Because the U.S. Government is looking at the effects and methods of drilling for gas, it only makes sense to spend time on rigs that already are

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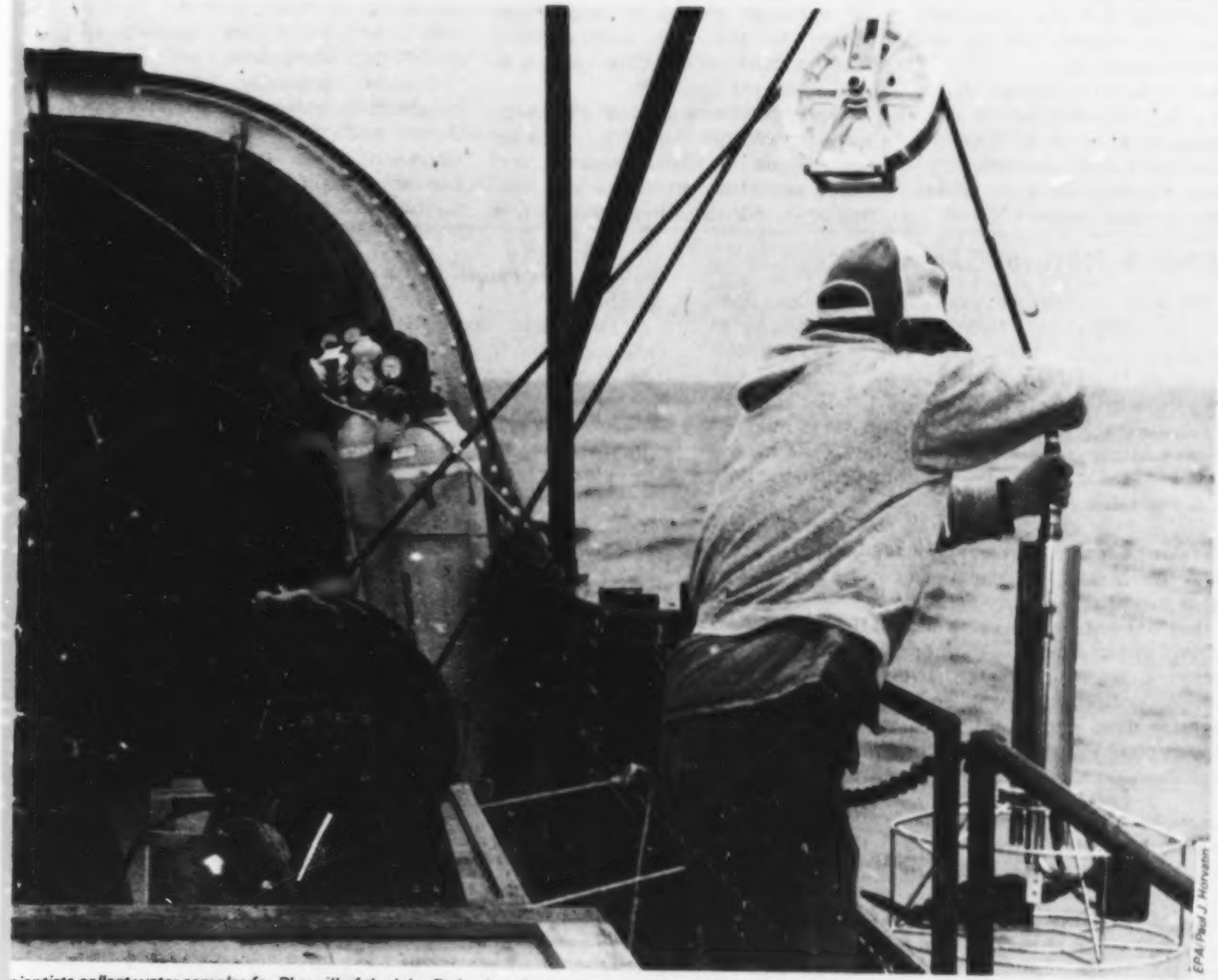

EPA: Paul J. Horvath

cientists collect water samples for Phase II of the joint Federal study to assess possible effects of Lake Erie drilling.

U.S. Natural Gas?

drilling. The Province of Ontario welcomed U.S. specialists onto the rigs they regulate so that they might see what Canada has found to be the most economical and environmentally sound ways of extracting this valuable source of natural energy.

EPA is involved in the study project because it is concerned about what such drilling could mean to Lake Erie and to the Great Lakes ecosystem.

Effluents that are part of the drilling cycle are of serious concern. Brines — salt water — can present greater problems for both drinking water and the living organisms in the lake than was once thought.

The clay and chemicals known as "drilling muds" are another matter that concerns EPA. These muds are pumped forn the surface into the cores of the bits that drill hundreds of feet down into the wells, in order to lubricate and cool the bits. Chips and rock cuttings that are raised to the surface in drilling are placed on "shaleshakers," fine mesh screens that both allow the rock chips to fall back into the water and recycle the muds. But a certain portion of these muds adhere to the rock cuttings and become an as-yet-undefined source of pollution to the lake.

Sands that come up with the muds are yet another concern. Because natural gas is found beneath and within sandstone and other soft rock that lies hundreds or thousands of feet beneath the lake, sand would be a natural by-product of gas drilling.

In the drilling process, strong acids are used to dissolve rocks within wells.These acids and other chemicals are pumped into the wells in order to extract more gas, and some of them could accidentally be let out into the lake.

Even changing the nature of the lake bottom, however slightly, could result in a resuspension of the sediments, where contaminants as well as underwater life are found.

To put these issues in their proper perspective and to find answers to the questions of most concern is the reason for EPA's close tracking of studies now being done.

Canada apparently feels it has satisfactorily answered such questions. By the end of 1977, more than 1,042 Canadian wells had been drilled beneath Ontario's section of Lake Erie. (Ontario is the only Canadian province that borders Lake Erie—or any of the Great Lakes.) Some 430 wells are currently producing or awaiting hook-up to produce gas for an underwater collection system that includes some 200 miles of pipeline. Since 1971 Canadian wells have produced more than 113.7 billion cubic feet (bcf) of gas, at an annual average rate of 5.6 bcf a year. Ontario's success rate—gas found in holes drilled—is 65 percent.

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What is Natural Gas

By definition, natural gas is "a natural fuel containing methane and hydrocarbons that occurs in certain geological formations...either in the gaseous phase or in solution with crude oil in natural underground reservoirs.'"

Natural gas is highly flammable and nearly odorless —the odor we smell in our house when it is escaping has been added by gas companies to alert consumers to any gas leaks.

Gas is an important source of fuel. Homes use it for heat, heating water, and cooking. Industries use it to fire the boilers that make steel,and for a host of other purposes.

It is not known for sure if gas, like oil, formed during an organic or an inorganic process. The inorganic theory holds that hydrogen and carbon were brought together under great pressure and temperature deep in the earth, and that the gas and oil that resulted found their way through porous rocks to collect in natural traps in the formation of the earth.

The organic theory, held by most scientists, explains that the hydrogen and carbon needed to form gas and oil came from the decay of tiny,ancient plants and animals. Over a period of millions of years, rivers that flowed down to the seas carried with them great volumes of mud and sand that were spread out by currents and tides over sea bottoms. New deposits were distributed, and tides over sea bottoms. New deposits were distributed, and under increasing weight of the new beds the ocean floors slowly sank. This in time created sedimentary rocks —sandstones and shales, limestones and dolomites. — beneath and in which natural gas is found.

The tiny organisms that died and settled to the bottom were buried and sealed off from the air. In time, pressure and warm temperatures, bacteria and chemical combinations of decaying produced both natural gas and oil

— S.N.

Two drill-rig workers at a site EPA visited operate equipment similar to that which would be used aboard rigs in U.S. Lake Erie.

The Canadian rigs that are being studied in Phase II are rotary jack-up rigs with floating drill ships. More than 95 percent of Canada's wells in the lake are now being drilled by four rotary units: Timesaver II, the Mr. Neil (on the cover), Telesis, and the Mr. Chris.

The Mr. Neil rig is 118 feet long and 50 feet wide. The rig is propelled, like a boat,to the site of intended drilling, with four legs up.When it is positioned for drilling,legs are lowered and the rig is raised automatically.Such rigs as the Mr. Neil are capable of drilling in water depths of up to 225 feet. (Lake Erie's maximum depth is 210 feet.) When a well has been drilled and gas found, divers connect pipes to it beneath the water. The pipes are connected to compressors on shore, which extract the gas and force it into distribution into distribution pipelines. They, in turn, direct the gas to industry or to homes.

Whether or not it will be decided that U.S. waters of Lake Erie are worthy of being explored and drilled for natural gas remains to be seen. EPA and COE are withholding judgment until the EIS is completed.

And, if the EIS suggests that drilling could be done without adverse environmental effects upon Lake Erie, any companies that decide they want to explore for natural gas will face a two-step process before they invest in rigs and crews — after they are awarded leases and other approvals by the appropriate State.

First, they will be required to apply for construction permits from the COE, to get rigs out into the lake and to build pipelines out to them. Second, they will be required to apply for NPDES (National Pollutant Discharge Elimination System) permits from the State to prove to the State and to EPA that whatever discharge associated with the drilling they do will be environmentally sound.

The final question industry will have to ask itself is whether or not the drilling for natural gas beneath Lake Erie will be worth the expense required to maintain whatever environmental balance will be callen for—if that is the recommendation of the 18-month study.

Susan Nelson is a Writer/Editor with EPA Region V who specializes in Great Lakes matters.

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How Much Gas Might There Be?

Researchers have been estimating possible reserves of natural gas beneath Lake Erie for years.

Total gas production for the three Lake Erie States interested in gas drilling (Ohio, Pennsylvania, and New York) in 1975 was 178.2 billion cubic feet (bcf), with Ohio producing 85.8 bcf. This supply of natural gas is from on-shore wells, which each of the three States has. The State of Michigan opposes gas drilling beneath its share of Lake Erie and the other Great Lakes it borders.

Over a one-year period that ended in March 1978, Ohio consumed more natural gas than did Pennsylvania and New York combined. Ohio industries consumed 74 percent of the State's total 100.5 bcf.

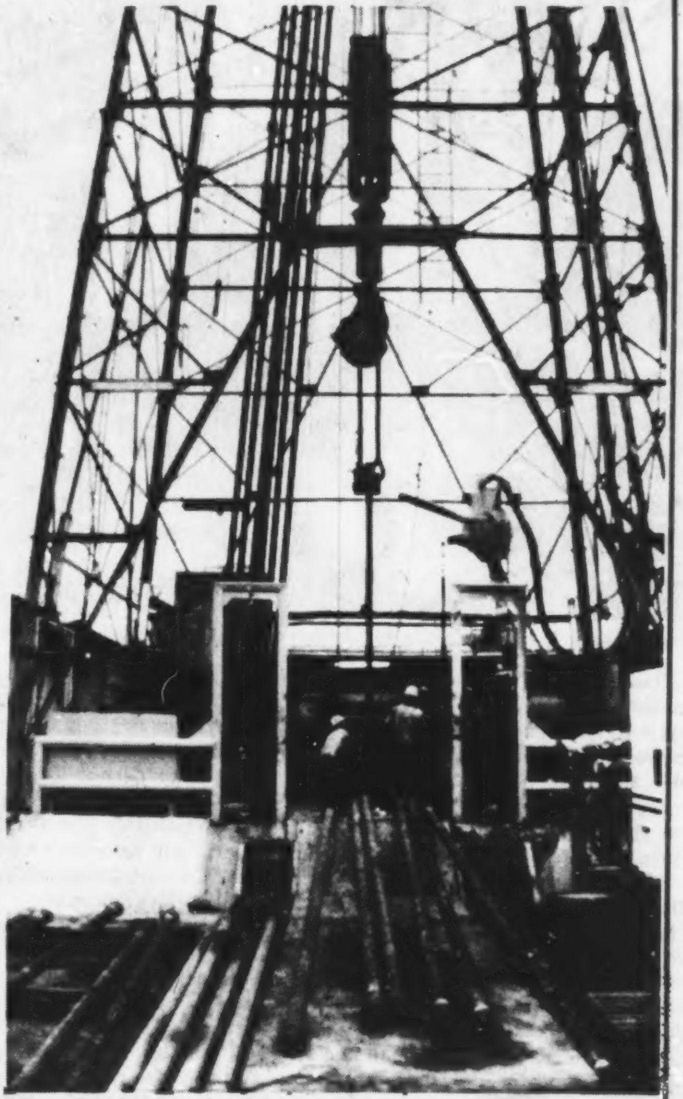
If drilling were permitted, estimates from the New York State Energy Office (1977) and the Ontario Ministry of Natural Resources (Hurd and Kingston, 1978) respectively suggest that between 533 and 888 bcf might be produced over a 22-year period within a 10-county area in the three States.

Hurd and Kingston, both Canadians, in 1978 placed Canadian and U.S. Lake Erie natural gas resources at 1,000 bcf each. Canada, they said, has already exploited 10 percent of that potential, and they estimated that another 20 percent is extractable with current knowledge. They also suggested that 50-90 percent of potential U.S. reserves could be exploited with present knowledge.

U.S. Lake Erie gas was estimated in 1976 to represent between 0.2 and 0.4 percent of total proved U.S. natural gas reserves.

If maximum production and natural gas deregulation both occurred in 1985, a Stanford Research Institute study has suggested that Lake Erie reserves would account for about 1 percent of the reserves estimated for a 13-State region.

— *S.N.*



Aboard a vessel drilling for natural gas, with drill-rig tower.

Environmental news briefs...briefs...briefs...

EPA Files Lawsuit Under RCRA Against Cleveland Firm

EPA Region V Office in Chicago went to court to clean up hazardous wastes at the Chemicals & Minerals Reclamation Inc. of Cleveland, Ohio.

A civil complaint and a motion for a temporary restraining order (TRO) were filed on EPA's behalf by the U.S. Attorney for the Northern District of Ohio against the firm in Cleveland. The TRO, granted by the judge or July 11, requires that the firm reduce the risk of fire, explosion, and toxic fumes presented by several thousand carelessly stored hazardous waste drums on the firm's property. The ultimate goal of the lawsuit is the removal of all drums and the safe disposal of hazardous wastes in the drums.

This is the first case Region V EPA filed under the Resource Conservation and Recovery Act (RCRA) in which the extraordinary remedy of the TRO was sought.

State Clean Air Plans Rolling in: EPA Approval Expected by Fall

In the Midwest, Indiana and Michigan have submitted complete State Implementation Plans (SIPs) for clean air. Minnesota and Wisconsin have submitted partial plans; and Ohio will submit portions of its plan by the end of August. Portions of the Illinois SIP have appeared in the Federal Register and are now open for approval. (See following news brief.)

Under the 1977 Clean Air Act Amendments, the deadline for SIP submission was January 1, 1979 and the deadline for SIP approval was July1, 1979. The amendments also mandate that issuance of new-source construction permits may be delayed on certain construction projects in States that are late with their plans. However, because of "good-faith efforts of Midwestern States in developing these clean air plans, Federal funds for highways, sewage treatment facilities, and other projects will not by cut off," said EPA Region V Administrator John McGuire.

EPA Invites Public Comment on Illinois SIP

EPA Region V has proposed to approve specific portions of the Illinois draft State Implementation Plan (SIP), after the public has had a chance to comment on the SIP or on EPA's proposal by August 30, 1979. Details of EPA's decision on this plan were published in the July 2, 1979 *Federal Register*.

The SIP outlines how Illinois plans to reduce air pollution to Federally acceptable levels by 1982, or in some special cases by 1987. The two target years are specified by the 1977 Clean Air Act Amendments. The aim of Illinois and other State clean air plans is to control the six most hazardous air pollutants: ozone, carbon monoxide, particulates (smoke, dust, fly ash), sulfur dioxide, nitrogen dioxide, and hydrocarbons.

Comments on the Illinois SIP or on EPA's proposed action should be sent by August 30 to: Maxine Borcherding, U.S. EPA Region V, 230 S. Dearborn St., Chicago, IL 60604. Comments are especially solicited for those portions of the SIP that EPA has proposed to approve conditionally.

Copies of the Illinois draft SIP and the July 2, 1979 *Federal Register* are available for public inspection at the above EPA office. In addiition, the SIP may be examined at Illinois EPA headquarters, 2200 Churchill Rd., Springfield, IL 62706. Copies of the *Federal Register* may also be available at certain law and public libraries.

NPDES Violators in the Midwest

Below are some of the more serious violators of NPDES permits. Formal Enforcement actions have been initiated against them.

ILLINOIS

Commonwealth Edison Co., Joliet
Commonwealth Edison Co., Waukegan
Commonwealth Edison Co., Will County
Modern Plating Corp., Freeport
SCM Corp., (Glidden Durkee Division), Joliet
Caseyville Township
City of Chester
City of East St. Louis
City of Herrin
City of Pekin

INDIANA

Amoco Oil Co., Whiting
Bunge Corp., Clymers
Laketon Asphalt Refining Inc., Laketon
City of Charlestown
City of East Chicago
City of Elkhart
City of Plymouth
City of Portage

MICHIGAN

BASF Wyandotte Co., Wyandotte
Lear Siegler, Inc., Mendon
National Standard Co., Niles
Muskegon County, Muskegon
City of Wyoming

MINNESOTA

Minnesota Power and Light Co., Aurora
S.B. Foot Tanning Co., Red Wing
City of Hutchinson
City of Moorhead
City of Rochester

OHIO

Chemlime Corp, Lisbon
Standard Oil Co., Lima
Sun Oil Co., Toledo
City of Massillon
City of Mount Vernon
Summit County #6 Plant, Hudson

WISCONSIN

Appleton Papers Inc., Appleton
Niagara of Wisconsin Paper Co., Niagara
City of Jefferson

Wastewater Dischargers Fail to Comply With NPDES Permits

Of the 1,075 major wastewater dischargers in the six-State Midwest Region, 394 (or 37 percent) were found in violation of their National Pollutant Discharge Elimination System (NPDES) permits.

The Quarterly Noncompliance Report, released by EPA Region V Office, covered violations between January 1 and March 31, 1979. Violations ranged from failure to submit a discharge monitoring report to failure to meet a construction schedule. Violations of the final effluent limitations contained in the permits were also cited.

Major violators by State are: Illinois, 152; Indiana, 22; Michigan, 71; Minnesota, 20; Ohio, 97; and Wisconsin, 32.

All NPDES permit violations are being followed up with appropriate enforcement actions either by the States or by EPA.

Environmental news briefs...briefs...briefs.

Hazardous Waste Enforcement and Emergency Response System Established

In July EPA announced the establishment of a nationwide Hazardous Waste Enforcement and Emergency Response System to deal with hazardous waste emergencies.

Part of the system is a National Hazardous Waste Enforcement Task Force and a new unit in the Oil and Special Materials Control Division. The Enforcement Task Force will coordinate Federal cleanup activities with its regional offices and with the States, including technical, scientific, and legal support work.

The cleanup of hazardous waste dump sites that threaten public health has been assigned the "highest agency priority," EPA headquarters said. EPA has now identified 151 dump sites nationwide that contain potentially dangerous amounts of hazardous wastes. Another 60 dump sites, also presenting potential hazard to public health and the environment, have been just recently discovered.

EPA Launches Chemical Substances Review Program

EPA began reviewing on July 1 new chemical substances before they are manufactured for commercial purposes, to evaluate any possible risks that such chemicals may present to human health or the environment.

If great risks are present, EPA may restrict the use of such chemicals, it may control their production or use, or it may seek an outright ban on production through an administrative order or court injunction.

The program, known "premarket notification," is a major step in EPA's efforts to control toxic substances. EPA expects to receive about 400 of these notifications during the next 11 months.

If EPA believes that it's not necessary to regulate a chemical in any way, the manufacturer may begin production after the advance notification period is complete, without specific EPA approval.

For premarket notification forms and instruction manuals, or further information, call EPA's Region V Toxic Substances Office, Paul Meriage (312) 353-2291.

WHERE THE WASTES ARE: MIDWEST REGION STATUS REPORT

	State legal action in progress	Federal legal action in progress	Remedial action completed	Site cleanup in progress	EPA site assessment in progress	Study in progress by other Federal or State agency	Site actively monitored	Data does not support imminent hazard action
EPA REGION V								
3M Woodbury Village, MN				●			●	●
American Recovery Co., Inc. E. Chicago, IN				●	●	●	●	
Ansul Chemical Co. Marinette, WS				●	●	●	●	
Arrowhead Refining Co. Duluth, MN					●		●	
Bofors Lakeway, Inc. Muskegon, MI	●			●	●	●	●	
Byron Salvage Ogle County, IL	●						●	
Calumet Container Hammond, IN	●				●	●	●	
Cast Forge, Inc. Howell, MI	●				●	●	●	
Central Landfill Montcalm Co., MI	●			●			●	
Cherrington Scrap Metal Oak Hill, OH			●					●
Chemical Mineral Reclamation Cleveland, OH					●		●	
Conservation Chemical Co. Gary, IN				●		●		
Fisher-Kalo Chemicals Kingsbury, IN	●				●	●	●	
Gratiot County Landfill St. Louis, MI						●	●	
Hammer's Construction Co. Perham, MN					●		●	
Hooker Chemical Co. Montague, MI	●				●	●	●	
Interstate Pollution Control Rockford, IL					●		●	
Kerr-McGee Disposal Site West Chicago, IL					●	●	●	
Laskin Greenhouse/Waste Oil Jefferson, OH		●			●	●	●	
Lyles Trucking Belleville, MI						●	●	
Mid-Co #1 and #2 Gary, IN					●	●	●	
Musket Ranch & Trading Post Anoka Co., MN					●	●	●	
Pollution Controls Inc. Shakopee, MN	●			●				
Reilly Tar & Chemical Co. St. Louis Park, MN	●				●	●	●	
Robert Ross & Sons Inc. Grafton, OH				●	●		●	
Seymour Recycling Corp. Jackson County, IN				●	●		●	
Story Chemical Company Muskegon Co., MI				●			●	
Summit National Services, Inc. Portage Co., MI					●	●	●	
Tipton-Martin Winnebago Co., IL							●	
U.S. Drum Chicago, IL	●				●	●	●	
Weisman Scrap Metal Winona, MN				●	●	●	●	
West K.L. Avenue Landfill Kalamazoo, MI					●	●	●	

Environmental news briefs...briefs...briefs...

Lake Michigan Researchers Find High Levels of Tin

Two scientist have found organic tin compounds in southern Lake Michigan that exceed the expected levels.

Dr. Thomas Tisue of Argonne National Laboratory in Argonne, Illinois, first came across evidence of the compounds in 1975-76, when he was testing and analyzing those waters for many trace elements. He routinely sent results of his findings to Scripps Institute of Oceanography in La Jolla, California, where researchers noted that levels of tin were very much higher than those found in the oceans.

In September 1978 Dr. Tisue and Dr. Vernon Hodge of Scripps went on a research cruise in southern Lake Michigan and took independent, concurrent core samples of the sediments. They analyzed their samples by independent techniques in their respective laboratories and both found tin levels at between 1 and 3 parts per billion in the waters--roughly 1,000 times higher than levels found along the seacoasts. Sediment samples from the lake bottom showed concentrations of around 20 parts per million.

The increase in levels of tin, particulary in the sediments, suggests that man's activity is responsible: Sediment samples dating from the 1800s show only about 1 part tin per million.

The organic tin in question has several things in common with lead, another metal that has shown a marked increase in the Great Lakes. Tin compounds are used to control larvae of the liver fluke and other pests, and they are used in such products as marine antifouling paint.

Dr. Hodge presented a paper on these findings at the American Chemical Society's annual meeting in Honolulu, in May. In June Dr. Tisue presented a paper at ACS's Great Lakes regional meeting in Rockford, Illinois.

Dr. Tisue emphasizes that "all work at this point is preliminary and needs substantiation. We need to make more extensive measurements."

Argonne National Laboratory has a continuing program grant from EPA to cover research on toxic substances in the Great Lakes.

Great Lakes Water Quality Subject of 3-Day Conference

More than 200 scientists, environmentalists, members of the news media, and the general public attended the annual Great Lakes Water Quality Meeting of the International Joint Commission (IJC) July 9-11 in Detroit. They heard that, while the quality of the Great Lakes appears to be improving, many problems continue to plague the world's most extensive freshwater system.

The IJC, consisting of three Canadian and three U.S. commissioners, is responsible for monitoring water quality cleanup efforts under the 1978 Great Lakes Water Quality Agreement between the two countries.

Key topics reported on and discussed were acid rain and toxic contamination; long-range atmospheric transport of such pollutants as PCBs; human health effects of pollution in the Great Lakes; phosphorus management programs; and radioactivity levels in the Lakes.

Reports of the conference are available from the IJC. To receive them, state areas of your interest and address your inquiry to Patricia Bonner at the IJC Regional Office, 100 Ouelette Avenue, Windsor, Ontario N9A 6T3.

Minnesota First State to Receive OK for Pretreatment Program

Minnesota became the first State in the Nation to receive EPA approval for its proposed municipal wastewater pretreatment and toxic substances control program. The program, OK'd by EPA in July, will supplement the National Pollutant Discharge elimination (NPDES) program which Minnesota has been administering since June 1974.

The pretreatment program, authorized by the Clean Water Act of 1977, limits the types and amounts of pollutants—particularly toxic substances—that may be discharged by industries into municicial sewage treatment plants. It also seeks to improve the recycling and reclamation of industrial wastewater and sludge.

While many municipalities have existing pretreatment programs, it is EPA's and Minnesota's intent to upgrade and conform them to the NPDES program and to establish additional programs where needed. Together with NPDES program, the pretreatment program will help assure the control of toxic substance discharges and provide better overall wastewater control by bringing Minnesota's industrial dischargers into compliance with Federal and State water, air, and sludge standards and regulations.

$1.6 Billion Hazardous Waste "Superfund" Proposed

Calling oil spills and human exposure to hazardous wastes two of the worst pollution problems in the Nation, President Carter asked Congress in June to establish a $1.6 billion "superfund" to help clean up such pollution.

The fund, which will consist of Federal money and fees on the oil and chemical industry, would be built up in four years: $250 million the first year, $375 million the second year, and $500 million in the third and fourth years.

The proposed legislation requires that Govenment be notified of spills and the presence of abandoned hazardous waste sites. It would provide emergency authority for the Government to clean up and alleviate the impact of spills and contain pollution at waste disposal sites. Another provision would alllow the Government to recover clean up costs from those responsible for creating pollution hazards. Compensation to innocent victims of spills for property damage or for loss of income because of damage to marine life is also provided.

Eighty percent of the fund would come from fees paid by business and industry; 20 percent from Government appropations.

Environmental news briefs...briefs...briefs

Stricter PCB Levels Effective August 28

On June 28 the U.S. Food and Drug Administration (FDA) announced new, lower allowable levels of PCBs (polychlorinated biphenyls) for fish, poultry, and dairy products sold in interstate commerce. The effective date for the new requirements is August 28.

Allowable PCB levels for fish will be lowered from 5 parts per million (ppm) to 2 ppm; for milk and dairy products, from 2.5 to 1.5 ppm; for poultry from 5 to 3 ppm; and for eggs, from 0.5 to 0.3 ppm.

In issuing its new, stricter levels, FDA expressed concern about effects on commercial as well as sports fishing in the Great Lakes. "With few exceptions," the FDA said, "saltwater species, which constitute most of the fish in the American diet, are rarely contaminated with PCBs. The highest levels of PCBs are concentrated in freshwater fish, such as coho and chinook salmon from the Great Lakes,fresh water trout and catfish." FDA estimated that there could be "a loss of about $6 million worth of fish a year" that cannot be sold under the new rules.

Commercial fishing has already been severely set back as a result of the 5 ppm levels for PCBs, and most Great Lakes issue advisories for persons who catch and can be expected to eat Great Lakes fish.

The International Joint Commission's Great Lakes Water Quality 1978 Annual Report notes a continuing decline of PCBs in eastern Lake Michigan coho salmon. The decline is not noted, however, in western Lake Michigan cohos and in the other Great Lakes whose fish or herring gull populations have shown PCB contamination.

Extensive monitoring of the Great Lakes and their fish and wildlife continues. EPA, FDA, and State agencies recommend that fatty portions of Great Lakes fish be removed (see diagram). Great Lakes fish weighing more than 7 pounds may be expected to have higher-than-allowed PCB concentrations.

PEOPLE

Alfred West

Alfred W. West, chief of the Operational Technology Branch at EPA's National Training and Operational Technology Center in Cincinatti, Ohio, received the Distinguished Career Award for his "outstanding contributions, leadership, and dedication to the control of water pollution." West, a sanitary engineer, is retiring after 18 years with EPA and predecessor agencies. He also holds the EPA Gold Medal for Exceptional Service.

John T. Rhett, since 1973 EPA's deputy assistant administrator for Water Programs Operations, has been nominated by President Carter to the newly created post of federal inspector for the Alaska Natural Gas Transportation System. Rhett's new duties will include supervising the enforcement of all permits and other authorizations issued by any Federal agency relating to construction of the 4,748-mile pipeline.

Dr. Vilma Hunt, deputy assistant administrator of EPA, has been promoted to direct all EPA health research activities.

Warren L. Braun, Virginia State Water Control Board, has been elected to serve a second year as chairman of the Ohio River Valley Water Sanitation Commission (ORSANCO). **Dr. Richard S. Engelbrecht**, professor of environmental engineering, University of Illinois, will serve as vice chairman.

Gordon G. Robeck, director of Drinking Water Research at the EPA Environmental Research Center in Cincinnati, received the American Water Works Association's highest award — the Medal for Outstanding Service. It was awarded for his role in promoting the exchange of information on safe drinking water.

The American Water Works Association (AWWA) honored two other EPA scientists in Cincinnati. Taking bows as co-authors of a prize-winning technical paper are **Alan A. Stevens**, chief of the Organic Control — Chemical Studies Section, and **Dr. James M. Symons**, chief of the Physical and Chemical Contaminant Removal Branch. Their paper, "Measurement of Trihalomethane and Procursor Concentration Changes," was cited by AWWA as the "most notable contribution to the science or practice of water works development as recorded in a publication."

Glen Sheppard, editor of the *North Woods Call* in Charlevoix County, Michigan, received the $1,000 Ben East Prize for excellence in conservation journalism. The award was instituted three years ago by the Michigan United Conservation Clubs. It also selected Assistant State's Attorney General **Stewart H. Freeman** as Michigan's Conservationist of the Year.

Applicant	Award Amount	Date
ILLINOIS		
Centralia	$ 9,675	6/19
Kankakee	40,360	6/8
Ogden	5,130	6/13
Western Springs	20,250	6/25
Dolton	10,575	6/23
Richview	3,750	6/28
Gibson City	63,225	6/28
Oak Forest	73,500	6/28
Bismarck	16,125	6/28
North Riverside	14,400	6/13
Crystal Lake	30,000	6/28
Willow Hill	25,500	6/28
Phenix Township	2,250	6/12
Oquawka	23,700	6/29
Murphysboro	39,375	6/26
Vernon	5,700	6/28
Dallas City	9,675	6/12
Schaumburg	145,650	6/28
Sterling	24,644	6/5
Annawan	3,075	6/25
Urbana-Champaign Sanitary District	7,500	6/8
Decatur Sanitary District	81,150	6/19
Gilman	41,475	6/27
Bloom Township Sanitary District	146,250	6/25
Glen Ellyn	1,116,525	6/8
Metropolitan Sanitary District of Chicago	6,361	6/6
Metropolitan Sanitary District of Chicago	29,631	6/4
Downers Grove Sanitary District	83,949	6/8
Bureau	339,300	6/27
Casey	1,233,150	6/28
South Palos Township Sanitary District	162,075	6/29
Metropolitan Sanitary Egan Dewatering Facilities	4,101,000	6/28
INDIANA		
Indianapolis	$ 50,325	6/8
Dunkirk	159,600	6/29
Jasonville	7,200	6/25
Richmond Sanitary District	213,600	6/25
Hamilton	2,282,320	6/25
Rising Sun	15,150	6/12
Delaware	202,200	6/25
Carlisle	1,097,025	6/29
St. John	3,710,175	6/28
Jasonville	1,089,225	6/29
Portland	2,676,075	6/29
Beech Grove	139,350	6/26
Anderson Township	1,139,925	6/29
MICHIGAN		
Kent County	$ 19,386	6/6
BranchCounty	26,475	6/27
Cumming Township	3,000	6/29
Watertown Township	10,200	6/29
Cass County	22,275	6/12
Detroit	2,833,500	6/28
Albert Township	39,750	6/29
Vicksburg	537,075	6/19
Hillsdale	33,149	6/26
White Cloud	10,969	6/19
Dewitt	10,575	6/8
Peck	2,449	6/19
Pewamo	1,335	6/15
Adams Twp-S. Range Sew. Auth.	253,425	6/26
Caro	206,250	6/28
Leelanau	7,499	6/27
Detroit	1,138,425	6/4
Oakland	121,050	6/19
Union Township	1,346,325	6/4
Genesee County	25,575	6/29
Potterville	8,475	6/27
Hart	29,399	6/22
Ludington	5,250	6/27
Calhoun County	30,675	6/25
White Cloud	3,363,300	6/29
Ottawa	2,441,550	6/29
Nashville	2,838,950	6/29
Coopersville	1,105,650	6/29
Kalamazoo Township	9,802,800	6/29
Gun Plain Township	1,293,075	6/26
Rockford	161,625	6/29
Martin	1,480,050	6/26
MINNESOTA		
Norwood	$ 3,600	6/29
Monticello	2,925	6/22
Waseca	21,750	6/29
Pelican Rapids	900	6/22
Spring Valley	9,750	6/7
Metro Waste Control Commission	39,675	6/19
Chatfield	18,600	6/29
Shafer	8,325	6/27
Vergas	12,525	6/27
Wykoff	15,825	6/26
Middle River	15,300	6/26
Walnut Grove	24,450	6/27
Cyrus	20,700	6/28
Waldorf	28,800	6/28
Round Lake	22,575	6/28
Hancock	26,850	6/28
Hills City	23,250	6/26
Wabasso	24,600	6/28
Hutchinson	66,675	6/29
Avoca	22,350	6/27
Northfield	17,625	6/12
Brainerd	34,950	6/7
St. Joseph	525	6/4
Caledonia	5,625	6/12
Two Harbors	34,950	6/25
Metro Waste Control Commission	239,250	6/27
Metro Waste Control Commission	31,575	6/25
Red Wing	3,375,750	6/29
Brainerd	6,344,350	6/29
Metro Waste Control Commission	505,297	6/25
OHIO		
Erie County	$ 12,375	6/27
Muskingum County	337,500	6/8
New Concord	3,000	6/25
Green Camp	750	6/4
Tiffin	22,350	6/6
Fostoria	80,520	6/27
Vermilion	21,375	6/4
Marysville	17,475	6/19
Delphos	131,775	6/20
Uniopolis	450	6/8
Eaton	18,300	6/29
Uniopolis	1,500	6/19
Columbus	180,000	6/19
Rutland	19,725	6/25
Erie County	693,975	6/12
Liberty Center	41,850	6/7
Lorain	2,214,450	6/8
Ft. Loramie	4,500	6/8
New Holland	507,150	6/4
Solon	10,050	6/8
Ashley	23,775	6/14
Clermont County	6,450,825	6/8
Carlisle	482,475	6/25
Waterville	29,850	6/25
Trenton	138,540	6/25
Xenia	2,652,450	6/26
Xenia	1,538,700	6/26
Urbanna	182,025	6/26
Warren Water Authority	292,950	6/26
Yorkville	550,950	6/26
WISCONSIN		
Blue River	$ 11,850	6/7
Darlington	55,650	6/7
Brookfield	300,600	6/26
Centuria	150	6/12
Appleton	252,125	6/12
Sturgeon Bay	48,642	6/12
Poygan Sanitary District	18,900	6/20
Poplar	12,000	6/20
Kiel	14,325	6/7
Madison Metropolitan Sanitary District	95,325	6/7
Somerset	2,925	6/7
Durand	94,575	6/29
Elroy	7,875	6/20

FEDERAL REGISTER

May 23, 1979 — Rules: Grants; State and local assistance: Water quality planning, management and implementation. **Proposed Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: Montana. Texas. Air quality implementation plans; delayed compliance orders: Connecticut (2 documents). Kentucky. **Notices:** Air pollution; ambient air monitoring reference and equivalent methods applications, etc.: Model 8850 Fluorescent Sulfur Dioxide Analyzer Pesticide applicator certification and interim certification; State plans: North Dakota. Pesticides; experimental use permit applications: 1-(4)Chlorophenoxy)-3,3-dimethyl-1-(1*H*-1,2,4-trizol-1-yl)-2-butanone. Chlorothiophus. Water pollution control: Data collection; schedule of surveys. **May 24, 1979 — Proposed Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: California (3 documents). Connecticut. Tennesee. Washington. **Notices:** Meetings: Science Advisory Board. Radioactive contamination from specified foreign nuclear detonations, Federal responses; multiagency memorandum of understanding. **May 25, 1979 — Rules:** Air quality control regions; criteria and control techniques: Pennsylvania attainment status designations; hearings. Air quality implementation plans; delayed compliance orders: Maryland. **Proposed Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: Minnesota. Ohio. Air quality implementation plans; delayed compliance orders: Kansas. **Notices:** Air quality implementation plans; approval and promulgation: Prevention of significant air quality deterioration (PSD); petitions for review (2 documents). Environmental statements; availability, etc.: Agency statements; weekly receipts. Meetings: State FIFRA Issues Research and Evaluation Group. Pesticides; experimental use permit applications: Agrobacterium radiobacter, etc. Toxic and hazardous substances control: Premanufacturing notification requirements and review procedures; interim policy statement; review by Executive Office of the President. **May 29, 1979 — Proposed Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: Maine. Rhode Island. Air quality implementation plans; delayed compliance orders: Kansas. **Notices:** Air quality implementation plans; approval and promulgation: Fall River, Mass.; sewage sludge incinerator; PSD permit. Improving Government regulations. Meetings: Innovative and alternative technology assessment manual. Scientific Advisory Board. **May 30, 1979 — Proposed Rules:** Noise abatement programs: Transportation equipment; interstate rail carriers; extension of time. **May 31, 1979 — Rules:** Air quality implementation plans; delayed compliance orders: Nebraska. Toxic substances: Polychlorinated biphenyls; exemptions from processing and distribution in commerce prohibitions; procedural rules. Polychlorinated biphenyls; manufacturing, processing, distribution in commerce, and use prohibitions. **Proposed Rules:** Air pollutants, hazardous; National emission standards, etc.: "Commenced"; definition. Air quality control regions; criteria and control techniques: Attainment status designations; Ohio. Air quality implementation plans; delayed compliance orders: Alabama. Iowa. Kansas. North Dakota. West Virginia. Toxic substances: Chlorofluoroalkanes, fully halogenated; inkless fingerprinting systems exemption. Polychlorinated biphenyls; chemical waste landfill criteria. Polychlorinated biphenyls, importation and manufacture; exemption petitions and hearing. **Notices:** Water pollution; discharge of pollutants: Maryland. **June 1, 1979 — Proposed Rules:** Water pollution control: Consolidated permit regulations and underground injection control regulations; hearings. **Notices:** Meetings: Science Advisory Board. Toxic and hazardous substances control: TSCA Interagency Testing Committee report to EPA; priority list for chemical substances testing. **June 4, 1979 — Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: New Jersey. Pennsylvania. **Proposed Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: Arizona. Water pollution control: Judicial review under the Clean Water Act — forum shopping. **Notices:** Air quality criteria: Ozone and photochemical oxidants; policy clarification. Meetings: State-FIFRA Issues Research and Evaluation Group. Water pollution control; safe drinking water; public water systems designations: New Jersey. **June 5, 1979 — Proposed Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: Massachusetts. Air quality implementation plans; delayed compliance orders: Ohio (2 documents). **Notices:** Air programs; fuel and fuel additives: Methylcyclopentadienyl manganese tricarbonyl-(MMT); suspension. Environmental statements; availability, etc.: Agency statements, weekly receipts. Pesticides; experimental use permit applications: Bacillus thuringiensis Berliner. **June 6, 1979 — Notices:** Air pollution control, new motor vehicles and engines: Diesel engine technology; 1981 NOx emission standard; waiver applications; hearing. **June 7, 1979 — Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: Tennessee. Air quality implementation plans; delayed compliance orders: Utah. Washington. Pesticide programs: Human use pesticides; exemption from FIFRA; notification to Agriculture Secretary. Water pollution control: National pollutant discharge elimination system (NPDES); revision. **Proposed Rules:** Air quality implementation plans; delayed compliance orders: Kentucky. Minnesota. Texas. **Notices:** Air quality standards: Summit County, Ohio; nonattainment designation for sulfur dioxide; inquiry. Meetings: State-FIFRA Issues Research and Evaluation Group. Pesticide registration, cancellation, etc.: Amitraz. Kabat tobacco protector. Norflurazon. 3,5,6-trichloro-2-pynidinyloxyacetic acid. Pesticides; tolerances in animal feeds and human food: BASF Wyandotte Corp., et al. Pesticides, tolerances in animal feeds and human food: ICI Americas, Inc., et al. **June 8, 1979 — Rules:** Air programs; fuel and fuel additives: Lead phase-down standard. Air quality implementation plans; approval and promulgation; various States, etc.: South Dakota. Improving Government regulations: Regulatory agenda. **Notices:** Environmental statements; availability, etc.: Agency statements, weekly receipts. Pesticide enforcement policy statements (PEPS); recission. Pesticides; emergency exemption applications: Dinoseb. Pesticides; temporary tolerances: Ehtephon. **June 11, 1979 — Rules:** Air pollution; standards of performance for new stationary sources: Electric utility steam generating units. **Proposed Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: Arizona. Delaware. Pennsylvania. Uranium Mill Tailings Radiation Control Act of 1978; implementation, inquiry. **Notices:** Air pollution; ambient air monitoring reference and equivalent methods applications, etc.: Model 8310 Carbon Monoxide Analyzer. Monitor Labs Model 8450 Sulfur Monitor. Air pollution control: Clean Air Act; Federal assistance limitations. Meetings; Federal Insecticide, Fungicide, and Rodenticide Act Scientific Advisory Panel. Pesticides; emergency exemption applications: Triforine (2 documents). **June 12, 1979 — Rules:** Air quality implementation plans; approval, and promulgation; various States, etc.: Alabama; correction. Pennsylvania. Air quality implementation plans; delayed compliance orders: Connecticut. Ohio (2 documents). **Proposed Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: Ohio. Pennsylvania. Virginia. **Notices:** Grants, State and local assistance: Resource recovery project development; President's urban policy class deviation. Pesticide registration, cancellation, etc.: Permethrin Technical. Pounce Technical. Pesticides; emergency exemption applications: Acephate. Permethrin. **June 13, 1979 — Rules:** Air quality implementation plans; delayed compliance orders: Pennsylvania. **Proposed Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: California. Air quality implementation plans; delayed compliance orders: New Jersey. Pennsylvania. **Notices:** Air quality implementation plans; approval and promulgation: Detroit Lime Co.; prevention of significant air quality deterioration (PSD); final determination. Pesticides, emergency exemption applications: (Z)-9-tetradecen-1-o1, etc.; correction. Pesticides, experimental use permit applications: Bifenox, Ethephon etc. N-tetradecyl formate etc. **June 14, 1979 — Proposed Rules:** Permit programs, consolidated. Toxic substances: Chlorofluorocarbons; essential use exemption for mold release agents. Water pollution control; National discharge elimination system and State program elements: Toxic pollutant discharge control improvement. **Notices:** Air pollution; standards of performance for new stationary sources: Glass manufacturing plants. Permit programs, consolidated; draft application forms. Pesticides; temporary tolerances: 2-Chloro-N-(2,3-dimethylphenyl)-N-(1-methylethyl) acetamide. Pesticides; tolerances in animal feeds and human food: ICI Americas Inc. Toxic and hazardous substances control: Premanufacture notices receipts.. Water pollution control: Manganese; alternate testing procedure. **June 15, 1979** — *See also* Interagency Regulatory Liaison Agency for document relating to the supplemental agreement of the Group. **Rules:** Water pollution control; National discharge elimination system and State program elements: Secondary treatment requirements modification; discharges into marine waters. **Proposed Rules:** Air pollution; standards of performance for new stationary sources: Glass manufacturing plants. Air pollution control, new motor vehicles and engines: Heavy-duty engines; 1983 and later. Air programs; assessment and collection of noncompliance penalties; corrections and republication of appendix.

ENVIRONMENTAL IMPACT STATEMENTS

Sponsoring Agency, Project Number, Type of EIS	Project Location	Description	Summary of Comments	Comment Date Rating
Housing & Urban Development 79-027-1015 Draft Supplement	Montgomery County, Dayton, OH	Acquisition and disposition for Newfields New Community	Impacts should be measured against present conditions, not against original plan. Mass transit should be discussed.	5/23 LO-2
Corps of Engineers 79-010-100 (Draft)	Penn., W. Va., Ohio, Ky., Ind., and Ill.	Operation and maintenance of locks and dams on Ohio River. Dredging navigation channel.	Reservations regarding adverse water quality impacts	5/23 ER-2
Corps of Engineers 78-043-115 (Final)	Ashtabula County, OH	U.S. Steel lakefront plant, east of Conneaut	Most concerns satisfactorily addressed except for (1) use of new far field model to simulate worst case water quality conditions in Lake Erie (2) evaluation of locating offsite solid waste disposal (3) effect of emissions on vegetation, soil, and visibility.	5/29 Draft ER-3
Corps of Engineers 79-014-152 (Draft)	Hancock and Rush Counties, IN	Flood control, water supply, water storage, and recreational facilities on Big Blue River	Concerns regarding wastewater treatment and associated water quality aspects of project. Possible adverse impacts on wetlands.	6/7 ER-2
Corps of Engineers 79-021-126 (Draft)	Sheboygan Harbor, WI	Operation and maintenance dredging	Method of dredging and disposal inadequate, due to polluted bottom sediments. Additional sampling to be done.	6/15 EU-2
Housing and Urban Development 79-012-1024 (Final)	Eagan, Dakota County, MN	Lexington South, planned unit development	No major objections.	6/21 Draft LO-1
Housing and Urban Development 79-003-1024 (Final)	Eagan, Dakota County, MN	Blackhawk Park, planned unit development	No major objections	6/21 Draft LO-1
Housing and Urban Development 79-027-1015 (Final Supplement)	Montgomery County, Dayton, OH	Acquisition and disposition for Newfields New Community	No major objections	6/21 Draft LO-2
Goverment Services Administration 78-020-1103 (Final)	Detroit, MI	Cargo inspection facility	Lack of noise analysis and definite plans for mitigation	6/25 Draft ER-2
Housing and Urban Development 78-082-1021 (Draft)	Hoffman Estates, IL	Poplar Hills housing development	Concerns regarding health and safety impacts of adjacent landfill, adequacy of wastewater treatment facility, long range availability of groundwater supply	6/25 ER-2

CODE:
LO - Lack of objections or minor changes suggested.
ER - Environment reservations on certain aspects of project; suggest preliminary determination of impact.
2 - Insufficient information, EPA cannot fully assess project but can make further study of modifications or alternatives.

NOTIFICATION OF VIOLATIONS

- FS Services Inc., Albany IL; hydrocarbons.
- Lissner Corp., Chicago, IL; particulates.
- ALCOA, Cleveland, OH; particulates
- Barmet Industries, Uhrichsville, OH; partculates
- Cleveland Electric Illuminating Co., Cleveland, OH; particulates.
- Watervliet, MI; particulates.
- Shell Oil Co., Harristown, IL; hydrocarbons.
- Texaco Inc., Lawernceville, IL; hydrocarbons.

A Notice of Violation is an official warning from the U.S. EPS that source is not complying with existing air pollution control regulations. The polluter has 30 days from the notification date to negotiate a compliance schedule before EPA can issue a Compliance Order or seek civil criminal actions.

1979 calendar

AUGUST 6-7
ERIC – TECHNOLOGY TRANSFER SEMINAR, sponsored by EPA, Office of Research and Development. "Innovative and Alternative Technology Assessment." **Atlanta, GA.** All-day affair, limited to 300 people. Contact D. Lussier, (513) 684-7394.

AUGUST 9-10
ERIC – TECHNOLOGY TRANSFER SEMINAR, sponsored by EPA, Office of Research and Development. "Innovative and Alternative Technology Assessment." **Boston, MA.** At the Boston Park Plaza Hotel. All-day affair, limited to 300 people. Contact D. Lussier, (513) 684-7394.

AUGUST 13-17
ENVIROMENTAL EDUCATION. To present ecological concepts leading to an understanding of wise enviromental practices, receive first-hand experience in soils study, terrestrial and aquatic ecosystems, fish and game management. At Silver Lake College, Manitowoc, Wisconsin. Contact Edward Ehlert, 1115 N. 8th St., **Manitowoc, Wisconsin, 54220.** (414) 684-3144.

AUGUST 28-30
WASTEWATER TREATMENT FOR SMALL COMMUNITIES, an EPA technology transfer seminar. Latest information by experts in the field on plans, design, and management of wastewater treatment facilities. No fee. **Indianapolis, IN.** At the Hyatt Regency Hotel. Contact Marti Velasco, U.S. EPA Region V, Water Division, 230 S. Dearborn St., Chicago, IL 60604, (312) 353-2314.

THE BEST INFORMED PEOPLE IN ENVIRONMENTAL CIRCLES READ PPP FROM A TO Z

Besides Environment Midwest and a tax refund from Uncle Sam, the most awaited piece of mail for thousands of envisonmentalists throughout Midwest is the PPP. Published twice a month by EPA Region V Public Affairs Office, the Public Participation Printout (PPP) is a very unassuming publication. A tip sheet, in fact: But it has more nuts-and-bolts information on environmental goings-on than publications ten times its size. In the PPP you'll find listed conferences, workshops, seminars, meeting, public hearings ,and special events. Plus information on the latest EPA brochures and regulations. So don't be left out of things environmental. For your personal **free** copy of the PPP, write to Leah Wilson, Office of Public Affairs, U.S. EPA Region V, 230 S. Dearborn St., Chicago, IL 60604. She'll put you on a mailing list quicker than you can say NPDES.

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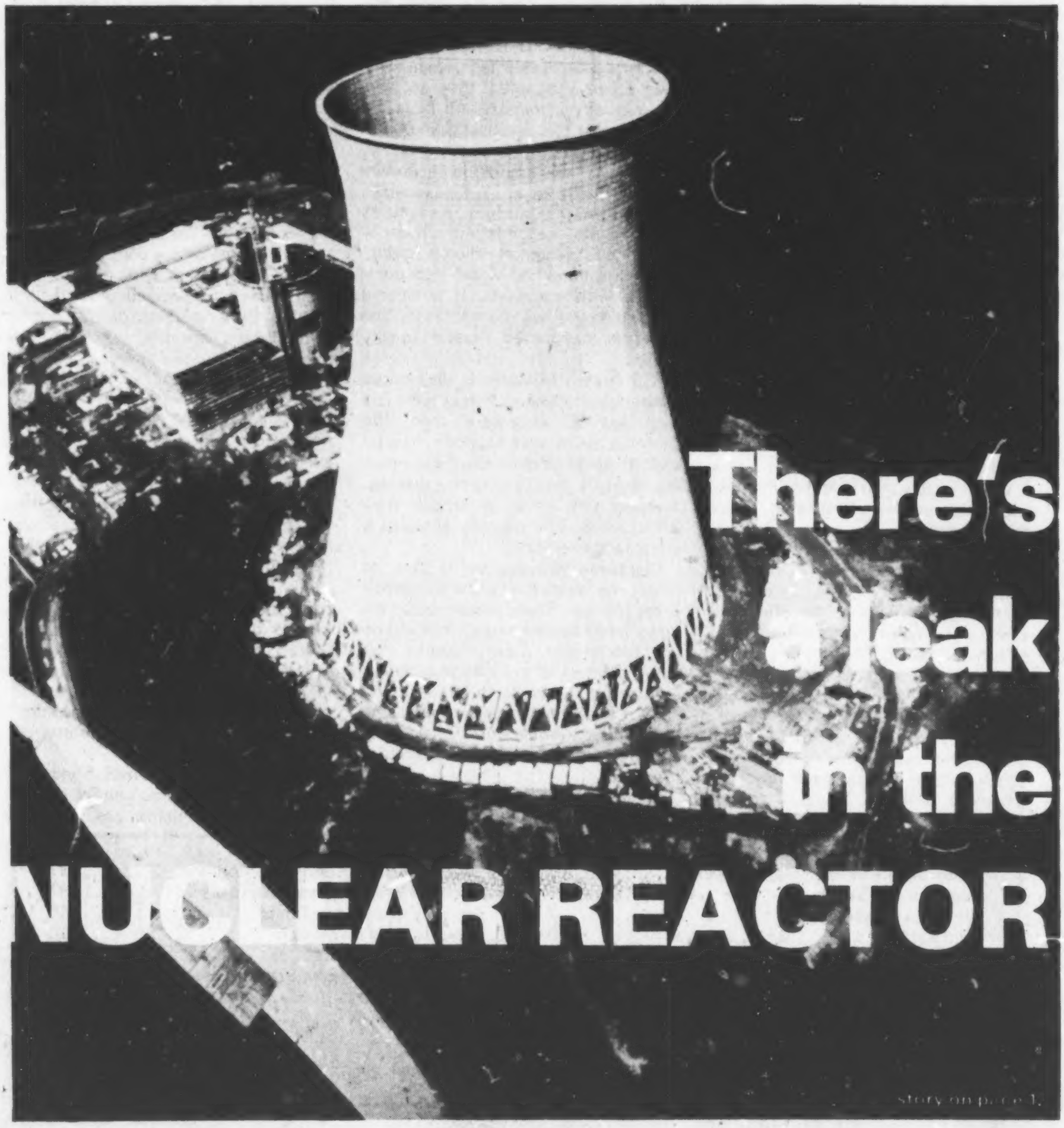
September 1979

EPA ENVIRONMENT MIDWEST



There's a leak in the NUCLEAR REACTOR

story on page 1.

WaterQuality Standards:

By Frank Corrado

Water quality standards today, most pollution officials agree, are getting the closest scrutiny ever as industries, cities, and government pollution fighters grapple with rising costs and tighter standards.

"Standards are the driving force behind the entire water cleanup program in this country," emphatically states David Sabock, an EPA water quality specialist in Washington.

The Congress, in both the 1972 and 1977 Clean Water laws, set two national goals:

"...that the discharge of pollutants into navigable waters be eliminated by 1985," and

"...that wherever attainable, an interim goal of water quality, which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water, be achieved by July 1, 1983."

EPA was not required to spell out in a regulatory manner how the 1985 goal is to be met, but the 1983 goal has been operational for the Agency for quite some time.

Water quality standards are the nuts and bolts means of meeting those national goals.

A water quality *standard* is not just a number pulled out of the air. It starts with scientists in the field and laboratory who look at the effects of various pollutants on water uses such as fish and aquatic life, drinking water, agriculture, recreation, and industrial water supply.

Based on these scientific studies, experts develop *criteria* that should protect the waters for a specified use. Those criteria, which cover a broad range of different types of waters (streams, rivers, lakes, etc.), recommend a certain level of water quality (such as five parts per million of dissolved oxygen for certain fish species). These criteria are contained in the "red book," more formally called the EPA *Quality Criteria for Water.*

State pollution agencies assess the real and potential uses of each body of water and select criteria to protect for those uses. Once selected criteria have been officially adopted, they become *water quality standards* and have the force of law. The approval process often involves lengthy public hearings.

To apply the standards, a *survey* must be made to determine whether the national minimum treatment requirements—secondary treatment or proscribed industrial effluent guidelines—will bring the water into compliance with standards. If additional waste removal will be necessary, the water is designated "water quality limited."

If a stretch of water is designated "water quality limited"—that is if more treatment is necessary—then the available assimilative capacity must be divided up among dischargers, much like slicing a pie. This means that dischargers will have to reduce their waste loads. The process is called a waste load allocation.

Discharge *permits* are written to reflect the waste load limits developed in the process. These limits—called *Effluent limits* become legally binding on the discharger. Complicating this whole process is an increasing clamor concerning the costs to industry and cities of meeting standards at the same time that new regulatory efforts are under way to deal with toxic chemicals in the water.

By year's end, EPA must publish new criteria for 65 toxic pollutants. Those criteria will form the basis for new standards and eventually will mean increased treatment costs for some dischargers.

The narrowing process of deciding which of those criteria will eventually end up as water quality standards is still under consideration.

According to Sabock, EPA will have four options as to how those 65 toxic pollutants are dealt with.

- First, the Agency can add 65 more chapters to its "red book." This would mean that if States wanted to adopt standards for toxics, EPA would use those "red book" criteria for reviewing them.
- Second, EPA could publish criteria for all or some of the 65, then ask the States to adopt standards. EPA would use the criteria developed for review.
- Third, EPA could decide that some of the 65 are especially important and then specify to the States to adopt those standards. As a check, EPA could still promulgate any new or revised standard, if State action were not forthcoming.
- Fourth, EPA could promulgate all 65 standards to begin with.

No decision on how to proceed has yet been made, but EPA officials believe that the third option has the best chance. Says one official: "It gives the States the option to negotiate with each criteria. And it follows the precedent of giving the States first crack, while allowing EPA to step in and promulgate later, if there's reason."

Just what the addition of toxic standards will do to costs is a matter of speculation at present.

Region V Water Permits Specialist Walter "Peate" Redmon notes, "Once these toxic standards are set, in-

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Toxics Enter the Picture

EPA Journal photo

dustries may find it more economical to work on process modification to reduce overall waste generation than to spend more money on end-of-the pipe black boxes."Adds Redmon,"In fact, this is already happening."

Redmon says that in some cases conventional pollution control technology has significantly reduced toxics. "We've some examples of this in the paper industry," he says.

High quality physical, chemical,and biological treatment — sometimes called advanced waste treatment — Redmond feels has a side-benefit of providing major toxic reductions.

Congress' concern over costs associated with expensive pollution control technology has resulted in a legal requirement now binding on EPA, which orders the EPA Administrator to personally approve all projects that require cities to go to advanced waste treatment where the additional cost is in excess of one million dollars.

"That's virtually every city in our Region," says Region V Water Division chief Charles Sutfin, who daily must deal with local officials irritated by additional delays in their sewage plant grants.

"From an enforcement point of view," says Redmond, of Region V's Permit Section," there are two approaches to water quality standards. Some States approach standards in a strict legal sense and insist on adopting only those which can be achieved immediately. The other approach is to consider standards as a goal to be achieved, but not a firm limitation.

"What you really need, to get an effective State program, is to set standards that both address present and future needs and contain enforceable limits and clear goals within a program of implementation. The critical thing is that the discharger understands what his future requirements are going to be, so that he can incorporate them in his pollution cleanup program."

Frank Corrado is director of Public Affairs for EPA, Region V.

State Implementation Plan Process: How It Works

An Environment Midwest interview with EPA Region V Administrator John McGuire, who answers some frequently asked questions about the State Implementation Plan (SIP) process.

Background: The 1970 Clean Air Act called for the States to develop State Implementation Plans (SIPs) to detail what control measures they would implement to reduce their air pollution to levels which met the ambient air quality standards. These are dynamic plans and are continually revised to meet new conditions and needs.

In the 1977 Amendments to the Clean Air Act, Congress, dissatisfied with the progress being made to improve the Nation's air quality, required States to identify those areas which had not attained the air quality standards and then to revise their SIPs as necessary. A new deadline—1982—was set. For two pollutants—carbon monoxide and ozone—which are most severe in urban areas, an extension to 1987 could be requested if certain conditions were met.

To urge the States to revise their plans in a diligent manner, Congress called for certain restrictions on new source construction and Federal funding, to apply if the States fail to submit approvable plans to EPA as required. The States have been engaged in this revision process for the last 18 months.

EPA Photos/Bill Bode

Have all States submitted their plans to EPA?

Plans have been submitted by 46 States and we expect the others to be submitted within a short time.

What must be included in State Air Plans?

The law requires that a plan must include: (1) adoption of all reasonable control measures on stationary sources and (2) for those areas requesting extension to 1987, an inspection and maintenance (I/M) program for in-use vehicles, and other transportation control measures in order to attain the standards necessary to protect public health and welfare.

For stationary sources that contri- the SIPs must continue to study and States must adopt regulations on a phased schedule after the initial plan submission. For particulate sources, the SIPs must continue to study and develop measures to control non-traditional sources, such as fugitive dust.

For I/M, where it is necessary, the plan submitted must contain the necessary legal authority and commitment to develop a program. While that program does not have to be operational until 1981 or 1982, necessary start-up activities should proceed promptly to ensure timely implementation. For transportation control measures, State and local governments must incorporate air quality considerations in their transportation planning process and commit to implementation of reasonable measures.

Will States be able to demonstrate attainment of the air quality standards in many of the worst polluted areas?

The most difficult pollutants to control will be carbon monoxide and ozone. Additional time—until 1987—can be requested by the States to meet these standards. We expect during this period substantial reductions will be achieved by emission controls on new cars. If the State can show that by using all reasonably available control measures it still cannot achieve the standards, the Act requires only that the State commit to those measures. It must then identify those additional control measures which could achieve the necessary emission reductions. However, the Act *does not* require the State to make a commitment in 1979 to implement these additional measures. A final commitment does not have to be made until 1982, giving the State and local governments ample time for further study and consideration.

What are the sanctions called for if States fail to submit approvable plans?

The law says that after July 1, 1979, unless an approved plan is in place no new permit applications for construction of major new sources of pollution can be approved. Also, certain types of Federal assistance, including grants for highways, air pollution control, and wastewater treatment facilities, may be withheld. Although no State plan in Region V was approved by July 1, new construction will not stop immediately. It is important to remember that:

- all construction permits submitted by June 30, 1979 will continue to be processed and will be issued without restriction.
- any permit received on or after July 1 will be processed normally and issued with a condition that a source cannot begin construction until a State plan is approved. Since the permit process normally takes several months, and we expect most plans to be approved by late fall, EPA doesn't anticipate any significant construction delays.
- the construction prohibitions involving the major stationary source pollutants, sulfur dioxide and particulates, will generally not affect broad areas, because violations of these standards tend to be more localized. In some cases a new construction prohibition will be limited to a very small area.
- State plan approvals are not an all-or-nothing situation. Plans for certain areas of a State or for certain pollutants can be approved—thereby lifting sanctions—while plans for other parts of the State, or for other pollutants, still await approval.
- Where appropriate, EPA intends to grant conditional approvals of State plans. A plan containing minor deficiencies will be approved and the State will be given an opportunity to correct these deficiencies within a specified date. A conditional approval will not result in sanctions — unless the State fails to submit corrections by the specified date, or unless the corrections are inadequate.
- At any time, a State may petition EPA to redesignate a dirty air area as clean. If, based on the latest monitoring data, EPA concurs, this will by itself lift any construction prohibition for the affected area.

Would a restriction on construction affect all sources of air pollution?

No, only sources with a potential of annually emitting 100 tons or more of a specific pollutant. Furthermore, the prohibition affects only those sources emitting the pollutant for which the health standard in that area is being violated. For instance, a particulate-emitting plant which is planned for an area violating sulfur dioxide standards would not be affected by the prohibition.

> ***"...One example of what can be done is the auto industry. This industry has commitments that will result in a volatile organic compound emissions reduction of more than 100,000 tons per year, or 80 percent of the average emissions from auto assembly plants. As a side benefit, these new low-polluting coatings developed in the industry will provide 7 to 10 times the corrosion resistance of existing systems."***

How are the sanctions on funding cutoffs for highways, air pollution control programs, and sewage treatment facilities applied?

Air pollution control program grants, Federal highway funds, and wastewater treatment facility grants did not immediately stop on July 1 in States with unapproved plans.

Highway fund and air pollution grant cutoffs will apply only if EPA concludes that States are not making reasonable or "good faith" efforts to submit a plan. If funding is withheld, it will apply only to areas where improved transportation systems and measures are required to meet air standards. An exception to this funding limitation is that safety, mass transit, and transportation improvement projects related to air quality attainment and maintenance may be approved and funded.

In addition, EPA may condition, restrict, or withhold EPA grants for the construction of sewage treatment works in any area if that State's plan has not been approved or if the plan does not address emissions from residential or commercial development around a new treatment plant.

How will growth occur in nonattainment areas?

EPA's emission-offset ruling allows new construction in dirty air areas — if there are compensating emission reductions from existing sources and if the new source achieves the lowest achievable emission rate. The offset ruling has been carried out by EPA and most States over the last two years. EPA's offset ruling will no longer be in effect as of July 1, 1979, in accordance with the 1977 Clean Air Act Amendments. Therefore, the emission-offset provision must be replaced by State-adopted new source review requirements before new construction permits, submitted after June 30, 1979, can be approved.

Can you cite any specific examples of major cleanup efforts?

One example of what can be done when an industry marshals its resources is the auto industry. This industry has commitments that will result in a volatile organic compound emission reduction of more than 100,000 tons per year, or 80 percent of the average emissions from auto assembly plants. As a side benefit, these new, low-polluting coatings developed by the industry will provide 7 to 10 times the corrosion resistance of existing systems. By working together, the States and the industry worked out a comprehensive, mutually acceptable program that will provide significant air quality benefits in a cost-effective, nondisruptive manner.

Another example is the can-coating industry, which has shown significant progress in low-solvent technology development. The States have worked closely with the industry to develop regulations that encourage and support this technology, including a "bubble policy" in some State regulations, to provide incentives to go beyond minimum compliance in some areas. This approach allows industry to focus

Continued on page 6

The SIP Process

What are the EPA Administrator's requirements for the transportation portion of the 1979 SIPs?

Essentially two major requirements. First, an identification of reasonably available transportation control measures (e.g., bus lanes, car-pool programs, park-and-ride lots) that have been analyzed and adopted through U.S. the Department of Transportation's process and shown to reduce emissions. EPA requires commitments to initiate implementation of these measures before 1982; a schedule for analyzing and adopting additional packages of transportation-control measures for inclusion in the 1982 SIP revision is also required. The 1977 Clean Air Act lists the measures to be analyzed and requires demonstration of attainment by 1987 with a combination of transportation measures and stationary source controls.

> *"...Expanded or new car-pool and van-pool programs coupled with preferential parking for ride-sharing vehicles are the most typical measures included in the SIPs....Expanded and new park-and-ride lots are also common among the plans, as are programs for upgrading the mass transit system with more buses and new rail lines....Many plans also contain actions to encourage bicycling, including bike lockers at transit stops."*

How many areas must meet these transportation requirements?

It is expected that approximately 55 urbanized areas will not be able to demonstrate attainment of the carbon monoxide and ozone standards by 1982 and thus will submit SIP transportation control plans. Some areas are still in the process of determining whether or not transportation control measures will be needed to meet the recently revised ozone standard.

What types of transportations control measures are contained in the plans that have been submitted and reviewed?

Expanded or new car-pool and van-pool programs coupled with preferential parking for ride-sharing vehicles are the most typical measures included in the SIPs. For example, Pittsburgh will take steps to initiate 1,700 new car-pools each year. It also aims to establish 50-100 new van-pools annually. Expanded and new park-and-ride lots are also common among the plans, as are programs for upgrading the mass transit system with more buses and new rail lines. Also, Boston will initiate a residential parking permit program similar to the system operating in Washington, D.C. Denver will implement variable or flexible work-hour schemes, including demonstrations of the four-day work week for Federal employees. Many plans also contain actions to encourage bicycling, including bike lockers at transit stops.

How many States are required to implement inspection and maintenance programs?

According to our data, 29 States cannot meet the health-related standards by 1982 and must therefore implement I/M programs. Twenty of those States now have programs or have legislative authority for I/M.

Will States that do not provide for such programs be penalized?

These are being evaluated on a case-by-case basis: It is still too early to make that determination. In one or two cases legislative sessions schedules have not permitted the program to be considered; in some others the authority is still being sought or local options are being explored. At the present time it appears that sanctions will only be imposed on a few States.

Does it make sense to push I/M programs now, with the energy crisis upon us?

Very much so. The goal of reduced emissions requires a properly maintained automobile, which results in improved fuel economy. Studies show this can result in as much as a 3-4 percent fuel economy improvement if the inspection program is coupled with mechanic training. Another benefit often overlooked is that emission testing provides diagnostic information that, over the long term, can reduce the cost of periodic maintenance. The biggest benefit, of course, is improved air quality. In New Jersey a statewide program has been in place since 1974; reduced emissions have contributed significantly to air quality improvement.

How much does I/M cost the car owner?

It varies from program to program, but the average is about $5 for the inspection, with needed repairs for a minority of failed vehicles running from $15 to $30. Data from currently operating programs show half of all repairs cost less than $15.

EPA photo/Birute Bulota

Region V SIP Status

STATE	SIP STATUS	EPA ACTION	LEGISLATIVE AUTHORITY
Illinois	Received initial SIP submittal for stationary source and transportation measures for control of O^3/CO/NO^2/TSP/SO^2.	Published proposed rulemaking in the 7/2/79 *Federal Register.*	Yes
Indiana	Received submittals for TSP (except for Lake, Marion, and Clark Co., SO^2, and initial submittals of transportation measures for the control of O^3/CO/NO.	Currently being reviewed prior to publication of proposed rulemaking.	Yes
Michigan	Received submittal for stationary source TSP/SO^2 control, stationary source O^3/CO Control, and mobile source O^3/CO control.	Published proposed rulemaking in 8/13/79. *F.R.* for TSP/SO^2 and stationary source O^3/CO. Mobile source controls currently being reviewed.	Bill to be introduced in fall session. State has requested 1-year extension.
Minnesota	Received Transportation Control Plans for St. Cloud, Rochester, Duluth, Twin Cities.	Proposed rulemaking on St. Cloud TCP in 7/2/79 *F.R.*; others currently being reviewed.	Attainment by 1982 without I&M; monitoring continues.
	Request for extension of submittal of Secondary TSP plans.	Published proposed rulemaking action in the *F.R.* of 5/25/79 and 7/6/79, respectively.	
Ohio	Transportation plans and Stationary Source RACT regs for control of o^3/CO/NO^2 and draft TSP regs submitted.	Currently being reviewed.	Bill in Legislature.
Wisconsin	Initial Primary TSP regs and portions of the CO/O^3 controls submitted.	Currently being reviewed.	Bill in Legislature. State has requested 1-year extension.
	Request for extension of submittal of Secondary TSP plans.	Published proposed rulemaking action in the *F.R.* of 5/25/79 and 7/6/79, respectively.	

Plans...and Penalties

In August 1977, the Congress of the United States, concerned by the failure in many areas to meet health related air quality standards by the dates set in the Clean Air Act of 1970, developed a new, more realistic timetable for achieving that goal.

To emphasize the serious need for States to develop the necessary State Implementation Plan (SIP) revisions as quickly as possible, and to stimulate the support of the general public and the industrial community in developing adequate plan revisions, Congress included in the Clean Air Amendments of 1977 provisions for mandatory and discretionary sanctions that were to be considered and applied if a State failed to submit an approved SIP by July 1, 1979.

The idea behind these sanctions was not to punish States but to support and encourage those States working in good faith toward the development of acceptable plans. Otherwise, those States not making any efforts would possess an unfair advantage over those States that had taken their air pollution control responsibilities seriously.

Although many States did not have a fully approved SIP by July 1, 1979, EPA's intent is to take a common-sense approach to the sanctions, since most States appear to be making reasonable efforts to meet the Clean Air Act deadlines. It will consider the discretionary sanctions to be necessary only in unusual cases. There is a mandatory sanction on new source permits, however, that went into effect July 1st in those States where there was no final approval of the SIP.

This sanction will be in effect only for that time period between July 1st and the date on which a final *Federal Register* notice is issued approving, or conditionally approving, the SIP for the area in question. All applications for such construction permits that were received by June 30 will be reviewed, and those permits can be issued.

Applications for new-source construction permits received after June 30th will also be reviewed during that time. But no construction can begin until the SIP is approved by EPA, although permits may be issued conditionally. As soon as the SIP is approved by EPA, construction can begin.

Further, the permit issuance delay applies only to major sources, defined as those which would potentially emit 100 tons of pollutant per year, and only to those facilities to be constructed in areas designated as "nonattainment" for the particular pollutant for which that plant is identified as a major source. In actuality, because of the several months normally required for review of a new-source permit, EPA does not expect a substantial slow-down in the issuance of these permits in EPA's Region V States.

ACID RAIN

In last month's Environment Midwest, an Environmental News Brief mentioned that more than 200 scientists, environmentalists, members of the news media and the general public attended the annual Great Lakes Water Quality Meeting of the International Joint Commission (IJC) July 9-11 in Detroit.

This month, we take a closer look at acid rain, one of the topics presented at the meetings and one that has implications reaching far beyond the Great Lakes Basin.

By Susan Nelson

Acid rain is a relatively new environmental term that is just beginning to be understood by the general public. But, while the actual pairing of words is new, the conditions it describes are not, and neither should they come as a surprise.

In the most simple terms acid rain—and acid snow and snow melt—explains how certain kinds of air pollution return to do more damage on earth, where they originated. Acid precipitation is the more exact term, because snow as well as rain carries pollutants from the atmosphere, where they can be transported hundreds or even thousands of miles from their source. Acid rain results, basically, when sulfur and nitrogen oxides– primarily from electric power plants, smelters, and automobiles—are chemically changed into acids in the atmosphere. As sulfuric and nitric acids, they are carried wherever wind currents blow before they are brought back to earth in rain or snow.

Acid precipitation was the subject of major presentations at the recent International Joint Commission (IJC)conference on Great Lakes water quality in Detroit. One was made by Dr. George Hendrey of Brookhaven National Laboratory in Upton, New York. Since the meetings, Dr. Hendrey's straightforward explanations and the urgings of IFC's Science Advisory Board have formed valuable parts of the foundation of acid rain literature that is now becoming available.

Acid precipitation, or acid rain, is a global problem. Its effects were first seen in Europe; it affects the Great Lakes and the Midwest because higher-than-normal levels of acidity in rain are found in these areas (see map). Several bays of the Great Lakes—on the Canadian side, in upper Wisconsin and Michigan, and perhaps in Minnesota, say some experts —are now known to receive substantial runoff from freshwater streams that have been made acidic by acid rains. These areas may cause small portions of these bays to become acid, or to retain high levels of toxic metals such as cadmium or aluminum.

The IJC, the U.S. - Canadian entity that monitors the quality and cleanup of the Great Lakes, estimates that emissions of sulfur dioxide in North America are about 23 million tons a year. Of this, approximately 19 million tons are emitted from U.S. sources, with 60 percent coming from the thermal power industry. In eastern Canada, the Commission estimates, some 60 percent of sulfur dioxide is a product of the non-ferrous smelting industry. Mankind's nitrogen oxides are about 22 million tons a year from the U.S., about equally from fixed and mobile (mainly automobiles) sources. Canada contributes some 1.4 million tons a year of nitrogen oxides, mostly from mobile sources.

While areas within the Great Lakes ecosystem are vulnerable to the ravages of acid rain, the Great Lakes themselves will not become acid lakes. They are "generally well buffered," says Dr. Hendrey. He explains that the very geology of the Midwest and of the Great Lakes in particular would prevent that from happening.

Brookhaven photo

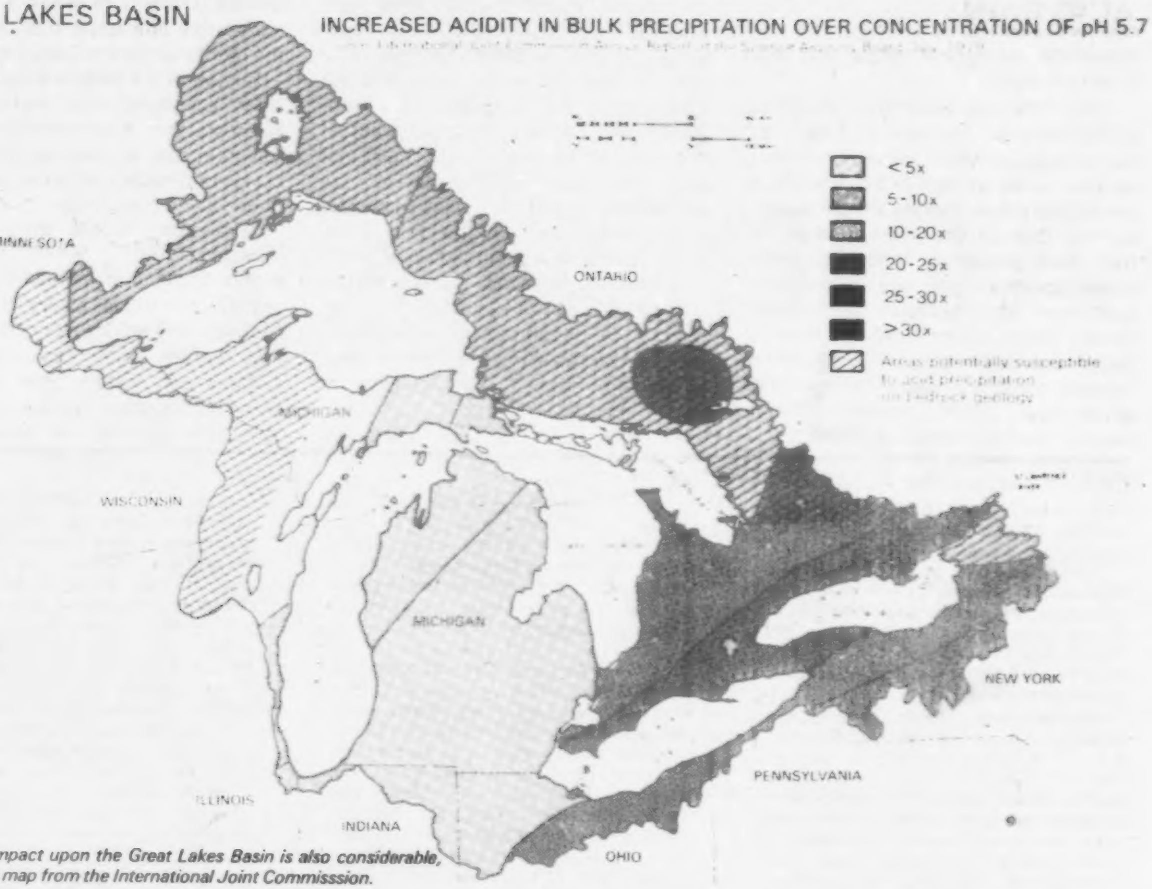
Dr. George Hendrey, one of acid rain's key researchers, in his office at Brookhaven National Laboratory in Upton, New York.

The picture is not so optimistic for another important Midwestern resources, however, Soybeans, which are one of Illinois' chief food crops and one of the most important cash crops in the U.S., are known to be affected by acid precipitation.

Dr. Hendrey has done "quite a bit of work with soybeans," and his presentation to the Great Lakes-related group in Detroit included slides that illustrate the difference between soybeans grown in non-acid conditions and those grown in a laboratory with various higher levels of acid "rain."

"Anything that would alter the yield and quality of the

GREAT LAKES BASIN


INCREASED ACIDITY IN BULK PRECIPITATION OVER CONCENTRATION OF pH 5.7
MINNESOTA
ONTARIO
MICHIGAN
WISCONSIN
MICHIGAN
NEW YORK
PENNSYLVANIA
ILLINOIS
INDIANA
OHIO
< 5x
5 - 10x
10 - 20x
20 - 25x
25 - 30x
> 30x
Areas potentially susceptible to acid precipitation on bedrock geology

Acid rains's impact upon the Great Lakes Basin is also considerable, as seen in this map from the International Joint Commisssion.

soybean could have an impact upon protein supply to the world," he explains, "particularly Third World countries, to which we export large numbers of soybean products." Obviously, it also would have an important impact on U.S. farmers and the U.S. economy.

"We have determined kinds of injury one might expect to see on foliage; we've carried out greenhouse experiments, which are preliminary to field experiments, in which we will attempt to evaluate the yield and the quality of the crop under different acid rain treatment."

Plants exposed to acid rain "show acid burns, or lesions, under the most extreme levels (pH of 2.9 on the acidity scale)" Dr. Hendrey says. "A rain as low as 2.1 pH has been reported, and rains as low as 2.9 pH occur occasionally in the northeastern United States. Rains in the low 3pH range occur frequently, and in that pH range soybean damage— while less visible, even microscopic—is evident in many places on the leaves. In addition," he says, "nutrients are leached out of the plants by this rain, which can be known only after chemical analyses of the plants."

To better understant the situation, it may be important to take a step back and look at the terms scientists use. Acids are chemicals that release hydrogen ions (H +) in solution. Scientists use the standard symbol pH to indicate the level of the concentration of these hydrogen ions, on a scale from 0-14. Number 7 shows a balance of acids and alkalines. Numbers below 7 pH show increasing acidity; numbers above 7 show increasing alkalinity. Precipitation is considered acid if it falls below a pH of 5.6, the normal equilibrium value of carbon dioxide and water.

But progression up or down the pH scale is not simple. At 7,acid/alkaline solutions are in balance. But at 6, a solution is 10 times more acid than it would be at 7. At 5 it is 100 times more acid; at 4, it is 1,000 times more acid; at 3, 10,000 times more acid; and at 2, 100,000 times more acid than a solution of 7 pH.

More simply, limes are a bit lower than 2 pH. Household vinegar (acetic acid) has a pH of 2.5. Moselle wine's pH is 3.3, that for orange juice is 3.6, and beer's pH is 4.1. Soda water has a pH of 5.3; pure" rain, 5.6; and baking soda, which is often used to neutralize acids, has a pH of 8.5. Toward the high end of alkalinity, ammonia's pH value is 12.

Acid rain, then, is not a new phenomenon. In the 1920s it was noted that numerous small, high-mountain lakes in Scandinavia were becoming acid and devoid of fish. By 1972 evidence that this and several other problems resulted from acid precipitation was so convincing that a major international research program was launched in northern Europe.

Dr. Hendrey carried out research in Norway, where it was found that the number of plants and animals is greatly reduced by acidification. "Yet," he says, "a few species are very tolerant and grow very, very abundantly under conditions of acidity. So diversity disappears, while a few species become extremely abundant,

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ACID RAIN

especially sphagnum moss and filamentous algae.

"But this—the adaptation to acidic conditions—is not true of fish: Fish just disappear. Major fishery problems occur at levels as high as 5.5, and there are no fish present when the pH reaches 4.5. One of the reasons may be that their preferred food organisms whole southern part, rivers are now acid from mountaintops to the sea. Seven major rivers formerly were a major European source for Atlantic salmon; today the salmon from those seven rivers have completely disappeared. And we have just found out," partly because of their excellent fishing, acid rain has already taken a he continues, "that Nova Scotia is beginning to look just the same as those Scandinavian rivers."

The Canadians claim that 48,000 Ontario lakes are going to become devoid of fish within the next 18-20 years if acid rain conditions continue. This is also true of Quebec, New Brunswick, and Nova Scotia. The Canadians note an alarming decline of salmon eggs in these Provinces.

Brookhaven National Laboratory is a prime contractor for EPA, and Dr. Hendrey is its chief investigator to determine the sensitivity of regions of the U.S. east of the Mississippi, from Minnesota to Florida and up through New England, where the most devastating effects of acid rain have been noted.

In lakes found in the Adirondack Mountains in New York State, long considered prime tourist attractions steep toll. "People [who are in business] in the Adirondacks are very mad at environmental scientists for losing them their tourists," Dr. Hendrey says. "We've pointed out that half the lakes in the higher areas have lost their fish. Many [of those lakes] are completley free of fish, lakes that were good fishing lakes in the past. Also, there is a rapid accumulation of plant material in those lakes—mosses, algae, other water plants—and leaf litter appears to be decomposing more slowly. If these trends are true, these lakes will become filled in with plant matter very rapidly."

Dr. Hendrey is now also investigating Colden Lake in the high peaks region of the Adirondacks. "It was surveyed in the 1930s, and no sphagnum moss was found in the lake. Today," he says, "all shallow portions—up to three feet deep—are completely covered with moss, and the moss is accumulating and not being removed by animals or bacteria, because those creatures have been removed by the acid. Many species of insects, invertebrates, snails are all gone; freshwater clams, many species of benthic zooplankton, mayflies, and stoneflies are gone," he says.

In Brookhaven's studies to determine which sections of the U.S. could be sensitive to acid rain, he has words of general cheer for Region V. "There isn't a whole lot that will happen in the Midwest, and acid rain isn't likely to affect the fresh waters [a great deal]." Why not? "Because the Midwest is formed primarily of bedrock that contains more limestone than is found in the Northeast or the Canadian shield."

But we in the Midwest dare not consider ourselves too lucky, for he suggests that it is most likely our air pollution that is creating some of the acid rain problem for other parts of the country and the world.

"Emissions in the form of sulfur dioxides (SO^2)," which come primarily come from smelters and coal- and oil-fired power plants, begin in the Midwest and are transported out of the area before sulfur dioxides become sulfates and sulfuric acid, which are what really cause the damage. By the time this polluted air gets to New England, Dr. Hendrey says, "it has been mostly converted." Big emission regions, he points out, exist along the Ohio River and along the heavily industrialized cities that outline the Great Lakes—Milwaukee and Chicago, Gary and Detroit, Cleveland and Erie, and from the large steel mills in Indiana, Ohio, and Pennsylvania.

What can the average person do about acid rain?

"Become aware of the problem," Dr. Hendrey suggests. "Realize that acid rain is a product of our industrial society, and that the damage it causes is a real cost to us all. We don't see it easily," he says, but in addition to the measurable changes in bodies of water and upon plants and forests and creatures that inhabit them, acid rain exacts another cost.

"Acid rain makes our material, manmade possessions last a shorter time. It

EPA Is Facing the Acid Rain Challenge

On Monday, August 13, EPA announced a new $900,000 effort to carry out additional research on acid rain.

"Rain in most of the country east of the Mississippi is now acidic," said a release that announced EPA intends to spend $4 million for acid rain research in the next year. "The State of New York indicates that more than 300 of its lakes cannot support fish" because of acid rain conditions.

Stephen Gage, EPA's assistant administrator for research and development, said: "This critical research is part of President Carter's call for increased efforts in dealing with acid rain and his directive that a comprehensive research plan be completed within the next 20 weeks." Addressing a question that has recently been raised by environmentalists, Gage said: "We must increase the use of coal to decrease our dependence on oil. This [acid rain] research will allow for better decisions on increased coal use while weighing the possible risk of acid rain."

On August 6 the President sent an Environmental Message to Congress that asked for $10 million to be spent for research on acid rain within the next year, or by September of 1980. EPA's $4 million commitment—40 percent of that request—is the largest expenditure from any single Government agency. It is possible on short notice because EPA has included acid rain appropriation requests in its budget for the last two years.

At the present time, EPA has committed $800,000 each in two categories: in support of monitoring and data measurement throughout the country, and for atmospheric processes—air modeling—that include other Government agencies. Acid rain research will continue in EPA laboratories in Duluth, Minnesota; Corvallis, Oregon; and Research Triangle Park, North Carolina; and in Department of Energy facilities in Argonne, Illinois; Upton, New York (Brookhaven National Laboratory); and Oak Ridge, Tennessee.

The third category, which is to include a minimum of $2.4 million, is the source of the $900,000 recently announced for acid rain research awards. Of that sum, an award of $500,000 is being made to North Carolina State University, which will serve as lead institution of several universities yet to be selected from the following States: New York, Pennsylvania, New Hampshire, Maine, West Virginia, North Carolina, Massachusetts, Vermont, Maryland, and Virginia. Emphasis for this phase of research will be placed on areas whose lakes already have been severely damaged by acid rainfall and whose lumber areas, soils, and food crops are considered the most sensitive

The remaining $400,000 is being allocated to EPA's Environmental Research Laboratory in Duluth, which will attempt to characterize the threat to 1,000 vulnerable lakes in Boundary Waters Canoe Area and Voyagers National Park, both in Minnesota, in northern Wisconsin, Michigan, and perhaps beyond. While damage in those areas has been less than that in the Northeast, studies cited in a report earlier this year—from EPA's Duluth lab, prepared in response to environmental concerns raised by plans for the coal-fired Atikokan power plant in Canada just north of the Boundary Waters Canoe Area—showed increased levels of mercury in trout, walleye pike, and northern pike that could have resulted from acid rain. Plans for that plant have been revised since.

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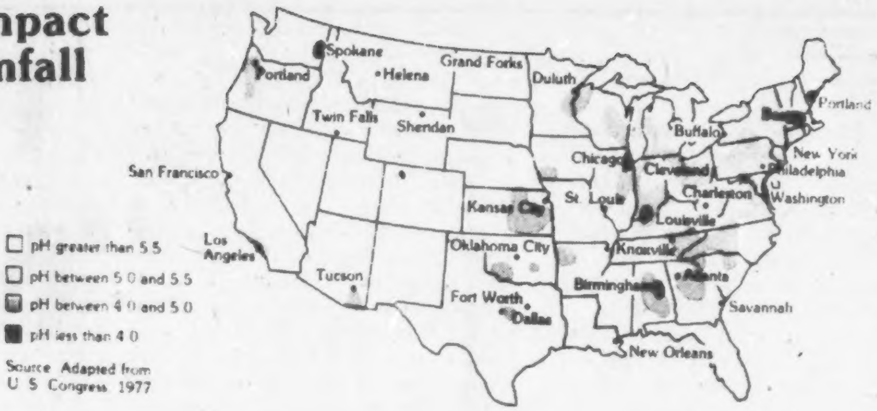
Regional Impact of Acid Rainfall



Source Adapted from
U S Congress 1977

corrodes buildings, weakens nylon, rusts automobiles."

In the presence of acid precipitation, IJC's Science Advisory Board observes, calcium and magnesium are released more readily from soils, which can affect soil fertility. "Low pH levels also reduce the rate at which cellulose in plant tissues is decomposed, [and] changes in plant communities eventually with affect the Great Lakes," reports the IJC.

In addition, the Science Advisory Board warns, "The hydrogen ions in acid rain may trigger the release of toxic heavy metals such as mercury and lead, which would otherwise remain bound to soils and lake bottom sediments. The released metals can affect fish and other aquatic life. Further, metals are generally more toxic in more acidic waters. Some of the streams and rivers entering the Great Lakes have become more acidic and carry high concentrations of heavy metals. Fish species using these areas for spawning or as nurseries could feel the effects.

"When the pH changes," the IJC report continues, "species inhabiting the water body change. As stress on the system increases, fewer species and decreasing numbers of those can survive. Below 4.5 pH all fish are eliminated.

"People are affected indirectly as their recreation areas change. Fish species and plant life alter, and the soils lose fertility. Directly, copper and lead concentrations in drinking water may increase because acidic water is carried in metal pipes."

What then, can be done— after more people become better informed of the problems and the increasing worldwide threat of acid rain?

Dr. Hendrey suggests that people will need to be "willing to pay the real dollar loss to acid rain in a different way—on our electricity bills, for instance, and not on a degraded environment." It is possible, he proposes, "to insist on a higher level of cleanliness from utility companies—to burn cleaner coal, to clean coal before it is burned or after is has been burned, with smokestack scrubbers."

A newer technique known as fluidized-bed combustion processes offers hope, he says. This is a technique in which "limestone is injected into the burner of a power plant and essentially scavenges sulfur dioxide as it's formed, so that it removes the sulfur during the burning process and also reduces the temperature of combustion so that less nitrogen oxide is formed by this process." Some experimental work is being done with test boilers, Dr. Hendrey says, "but they are expensive."

Yet, he suggests further, it may be better — say nothing of fairer — "to pay that cost. Instead of ruining a tourist industry [such as the Adirondacks area] in New England, or paying a large cost in a small area, it may be better to pay a similarly large cost, but to spread it out over a large area."

This past May 25th, EPA Administrator Douglas Costle announced final rules for new coal-burning electric power plants. The new-plant rules are substantially more stringent than current standards and will permit greatly increased coal use without increasing national sulfur oxide and particulate—dust, smoke, and fly ash—emissions.

In effect, the new rules will require sulfur dioxide removal devices called scrubbers on all 350 new power plants expected to be built in the U.S. between now and 1995 "Nationally," Costle said at the time ,"sulfur dioxide emissions from the new plants will be reduced to half the levels allowed by the existing standard. Particulate emissions will be 70 percent lower, and nitrogen dioxide will be 20 percent lower." Under the new rules continuous monitoring of emissions is also required.

Costle estimates that the new standard will increase the average monthly residential electric bill in 1995 by about 2 percent over the current standard. The new regulations also contain provisions that encourage development of other new control technologies for power plants. For instance, if it is found that an emerging technology cannot achieve the new standards but offers superior environmental performance, alternative standards could in the future be established by EPA.

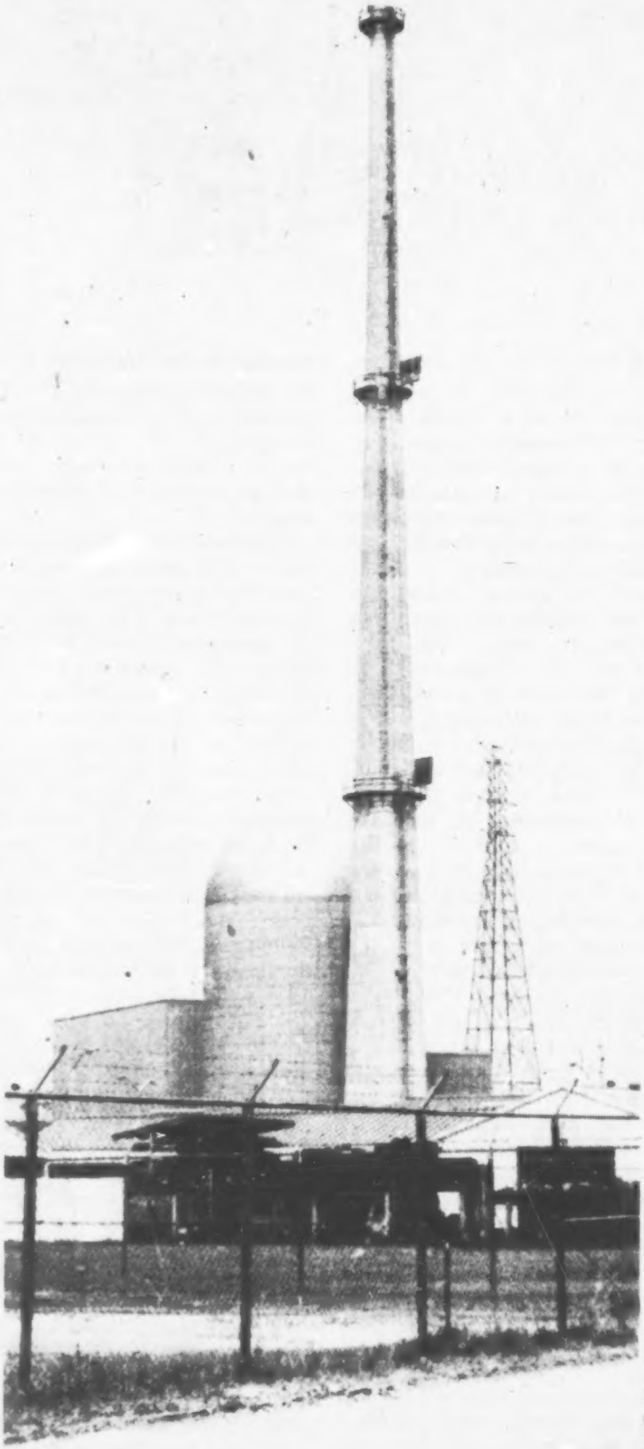
It is clear that EPA and the White House are both concerned about acid precipitation. So too is the IJC. Recognizing the widespread nature of the problem, its Water Quality Board's 1978 Annual Report, distributed at the Detroit meetings in July, concludes two things: "that the technology is available to substantially reduce emissions from current sources although at considerable financial cost and with the potential for solid waste management problems," and that "unless emissions are reduced, widespread irreversible harm to the ecosystems susceptible to the effects of acid precipitation will occur within 15 years."

IJC's Water Quality Board "therefore recommends that the Commission ask the Governments (of both the U.S. and Canada), as a matter of urgency, to reduce the total atmospheric emission of oxides of nitrogen and sulfur from both existing and new sources."

Susan Nelson is a writer/editor for EPA Region V who specializes in Great Lakes-related matters.

There's

"NUCL



EPA photo/R. John Rapsys

Nuclear reactor of the Genoa plant is housed in the silo-shaped building. This is where the "accident" occured.

Wisconsin puts the Radiation Emergency Response Plan to a realistic test

By R. John Rapsys

The deputies at the Vernon County sheriff's office in Viroqua were on their first cup of coffee when the call came. It was 8:05 a.m.

The reactor at the Genoa nuclear power plant developed a leak, the caller said, and back-up systems have not been able to stop it. Assistance is urgently needed.

The leak in this case was a fake. But it set off a series of events in a test that would show whether Wisconsin's Radiation Emergency Response Plan really worked. The date: July 27, 1979.

Deputy Sheriff Errett Cox swung immediately into action. First he called the nuclear plant, some 17 miles away on the Mississippi River, to verify the mock emergency. Is there danger to people in the immediate area he wanted to know. Will ambulances and fire equipment be required? Can guards at the plant notify residents of the nearby trailer park? What's the wind direction and speed?

After receiving answers to his questions Cox started to make other calls down the checklist. Key people and organizations were notified first: the Wisconsin Warning Center in Madison, the State capital; the local civil defense director; the sheriff of Vernon County, who had set up a forward command-communications post in a trailer; the highway department, and others.

In a calm, matter-of-fact voice, using both telephone and radio, Cox issued one instruction after another:

"Request you block traffic on Highways 35 and 56."

"Stop all trains five miles north and south of Genoa."

"Genoa Dam-stop all boat traffic on the Mississippi five miles north and south."

Since this was a simulated emergency, Cox was careful to announce at the beginning and the end of every transmission that this was a test. No traffic was actually stopped, but sheriff's and State police were at their assigned places, quick to respond to a real situation.

Neighboring counties alerted

The western border of Vernon County is on the Mississippi River, and across lie the green fields of Iowa and

a leak in the
EAR REACTOR!"

Vernon County Deputy Sheriff Errett Cox uses phone and radio to send radiation alert messages during the test. Everything hinged on communications. Below, map is checked before subteams are sent into the nuclear impact zone. From left: Al Troullier, Manitowoc Health Department; Radiation Specialist Pete Tedeschi, EPA Region V; and Mark C. Bunge, radiation consultant with the Wisconsin Department of Health.

Minnesota. What if radiation fallout headed that way? Houston County in Minnesota and Allamakee County in Iowa were alerted next.

The neighboring Wisconsin counties of La Crosse, Monroe, Crawford, and Richland received emergency calls, too, and their sheriffs were asked to give a hand. The sheriff of LaCrosse County received a very important assignment — to notify all TV and radio stations in the area. In the case of a real nuclear emergency, they would alert their audiences of the danger and broadcast the evacuation routes people must take.

"The big thing is to make sure that communications between headquarters and people in the field are in perfect working order," said Pete Tedeschi, head of EPA's Region V Radiation Program and one of the Federal observers monitoring the test. "We also watch how long it takes for people in the field to respond to a situation or to a change in plans. Naturally, without good communications the entire test would fall flat on its face. And in a real emergency...confusion, panic, and tragedy would be the order of the day."

While the communications network was humming with alert messages, buses were brought to within three miles of Genoa. In an actual nuclear emergency, the employees of the nuclear plant as well as some 500 citizens of Genoa would be evacuated. In fact, everyone within five miles of the reactor would be taken to safety. If the situation dictated, further evacuation would take place.

After the crucial communications and alert phase, field observers from various Federal agencies drove to the Viroqua airport to meet the Emergency Response Team coming in from Madison. Led by a squad car of sheriff's deputies, the observers arrived at a flat meadow with a small building off to the side and a wind sock flapping in the breeze. "Airport" was a grandiose name for it.

Helicopter airlifts team

Several cars of State police and half a dozen members of the Wisconsin Department of Health were already there. Soon a tiny speck appeared in the overcast sky. As it drew nearer from the southeast, the outlines of a helicopter became clear.

The Emergency Response Team landed after a 36-minute flight from Truax Field in Madison and piled out of the helicopter with radiation monitoring and other gear in hand.

EPA photos/R. John Repsys

Emergency Response Team arrives at Viroqua airport from the State capital in Madison. Wisconsin's Army National Guard was responsible for the airlift.

"Our job is to airlift the emergency teams in case of a nuclear accident," said Col. Richard Fuszard of the Adjutant General's Office, Army National Guard. "We can mobilize as many as 17 helicopters in an emergency and drop emergency teams anywhere in Wisconsin."

The Emergency Response Team made a last-minute check of their instruments, which carried such names as "Cutie Pie" and CDV-700 & Window. (The first measures high-level radiation; the second, low-level radiation.)

"Our measurement techniques are much better today," said EPA's Tedeschi. "Still, these instruments are very sensitive. If moisture gets in, they could give a wrong reading."

A map of the immediate area was spread out on top of a car trunk. Everyone huddled for a quick consultation before fanning out into the supposedly evacuated impact zone.

Radiation samples would be taken from the surrounding air, water, soil, vegetation...and milk.

In Wisconsin, where the dairy industry plays a very important role in the State's economy, it is vital to measure the radio-iodine and radio-isotope content in milk, Tedeschi said. If levels of radiation were too high, the milk would be taken off the market.

On the Mississippi

One of the emergency subteams included Carlton Meschievitz, MD, and Jim Parkin, a radiation consultant. Both were from the Wisconsin Department of Health. It was the responsibility of this subteam to take radiation samples in Stoddard, a small village on the Mississippi River about six miles north of the Genoa nuclear plant.

They left Viroqua airport in a State police car, accompanied by Col. Fuszard and followed by EPA's Tedeschi. No sirens howled, no red lights flashed this time, but in a real emergency they would. Following a meandering road through the rolling, picturesque countryside,the two-car caravan arrived at the Water's Edge Motel in Stoddard and caused a small commotion. After explaining to the people that this was just a test, the subteam began to collect samples. While Parkin drew some water from the Mississippi River and plucked a handful of grass, Dr. Meschievitz collected an air sample and a bit of soil.

A crude check for radiation was made on the spot to see if the samples presented a hazard and required special containers.

"The samples will be flown to Madison and carefully analyzed in the lab," Tedeschi said. "The measurements we take in the field, however, can tell us right away if it's safe for people to return to the area."

So-called chips, or thermoluminescent dosimeters, are also used to measure gamma radiation. Left for a time in the field, the chips tell how much radiation has accumulated, Tedeschi explained.

The subteam took another set of samples at the

Nuclear Reactor

(continued from page 16)

Genoa nuclear plant and at one inland location, then headed back to Viroqua to join other subteams for a short, post-test critique. It was all over by 1 p.m.

"Test is a great thing"

Local media carried news of the Radiation Emergency Response Test, but most people were not aware of it. Some, though, noticed the unusual number of sheriff's and State police.

There was also a little event not in the official scenario. One man, it seems, decided to ignore the presence of all those officers and proceeded to rob the bank in Viroqua. He was caught; he should have known he didn't have a chance.

Citizens in neighboring LaCrosse thought the test was a good idea. "Nuclear plants are here to stay," said Sue Nodlof. "Let's keep them as safe as we can, but if there is an emergency, at least officials will know what to do now that they've gone through a test." But what's going to happen to those who are exposed in a real nuclear emergency? she wondered. "Will the Government take care of their hospital bills?"

"The test is a great thing," said Ron Renner. "It gives people operating the plant an idea of what to do in case something goes wrong." Nuclear energy is not that dangerous, but the average individual doesn't understand it, he added.

"I'm not worried about the nuclear plant," said Theresa Rutz, "but safety must come first, and such a test is necessary to help assure it."

What did EPA think of the test? "Everything went pretty well according to plan," said Tedeschi, "and Wisconsin stands a very good chance to become the first State in the Midwest with a Federally approved Radiation Emergency Response Plan."

EPA observer Tedeschi's job during the test was to see how radiation measurements are made, that all the required samples are taken, and that correct radiation dose assessments are made.

Besides Tedeschi, there were Federal representatives from the Nuclear Regulatory Commission (NRC), the Department of Energy (DOE), and the Federal Emergency Management Administration (FEMA).

"We are all members of the Federal Regional Advisory Committee," Tedeschi said, "and in this case we acted as schoolteachers who graded the test. This exercise showed us Wisconsin's capability to respond to its own plan. It was also a valuable training exercise for the State people."

Based on recommendations of the various Federal agencies who acted as observers, NRC will make the final determination whether or not Wisconsin's Radiation Emergency Response Plan is approved.

R. John Rapsys is a writer with EPA Region V and editor of Environment Midwest.

RADIATION EMERGENCY RESPONSE PLANS — WHERE THEY STAND

"There is a Federal program under way to get State Radiation Emergency Response Plans operational," says EPA Region V Radiation Specialist Pete Tedeschi.

- So far, there are only 6 or 8 States nationwide with approved emergency response plans. Wisconsin may be the first State in the Midwest to get such a plan approved. Ohio's plan is scheduled to be tested next.
- The Hart Bill now in Congress would halt all nuclear construction, deny new licenses, and even shut down nuclear power plants in States that do not have an approved emergency response plan. A number of other bills relating to nuclear safety are also pending.
- There are 19 operating nuclear reactors in EPA's six-State Midwest Region.

HOW TO GET AN OK FOR A STATE PLAN

- The State submits a Radiation Emergency Response Plan to the Federal Regional Advisory Committee.
- The Committee reviews the plan, looking for 70 specific items that such a plan must include. Other items may be recommended but are not mandatory.
- After the review, the Committee gives a detailed critique to the State: what is missing from the plan, what is good about it, etc.
- If the plan passes the review, a field exercise, or test, is scheduled.
- The field test is rated by Federal agencies. EPA looks at sampling and radiation measurement techniques; Department of Energy (DOE) judges the State emergency team's response time to various items in the scenario; Federal Emergency Management Administration (FEMA) assesses the plan's logistics: communications, evacuation, etc.; Department of Health, Education and Welfare (HEW) and the Federal Drug Administration (FDA) look at the plan's medical aspects: how radiation victims and other injuries are handled.
- The Federal agencies on the Committee rate the State plan and the test, then make a recommendation to the Nuclear Regulatory Commission (NRC).
- Based on this recommendation, NRC in Washington either approves or rejects the State plan.

J.R.

Waste Alert!

By Art Baden

On August 7, 1978 President Carter declared Love Canal in New York a national disaster area. Almost one year later, 200 citizens, business people, and government officials met in Madison, Wisconsin for Waste Alert!, a conference on waste management issues facing the Midwest.

This intensive, three-day program brought together people of many diverse interests to learn about solid and hazardous waste management in the six-State Midwest Region and to arrive at some positive approaches for dealing with problems inherent in these areas.

Waste Alert! participants were exposed to all sides of the issues. Weldon Crawford, president of the Chrome-Rite Company, an electroplating firm in Chicago, talked about the severe economic impact he fears when the Resource Conservation and Recovery Act (RCRA) regulations governing hazardous wastes go into effect next year. Doris Carver, a landowner and farmer from Deerfield, Ohio, related her frustrating attempts to get State, local, and Federal officials to close down what she and many of her neighbors regarded as a dangerous chemical dump in their community.

Rick Jameson of the Michigan United Conservation Clubs told how that group helped to get a bottle bill passed in the Michigan State legislature, while Judd Alexander, a senior vice-president at the American Can Company, had a more critical view of beverage container deposit legislation such as Michigan's.

Steffen Plehn, deputy assistant administrator for solid waste at EPA, spoke on EPA's new initiatives to clean up improper hazardous waste management facilities by using the enforcement powers vested in RCRA. Working with the States and the U.S. Department of Justice, he said, EPA is actively seeking out potentially hazardous sites, determining what action is needed to clean up the sites, and initiating enforcement action when necessary. Three directors of State Solid Waste programs in the Region were also in attendance at Waste Alert!, providing citizens with the opportunity to talk directly with State solid waste decision makers.

These and other speakers were supplemented by numerous workshops, in which speakers and conferees participated in small group discussions on such topics as waste oil recycling, wetlands and waste management, mining wastes, development of State hazardous waste legislation, and resource recovery.

The Waste Alert! in Madison was the second of 10 Regional conferences being held across the country in 1979 and 1980. The Waste Alert! program is organized and run by six national public interest groups, under grants from EPA's Office of Solid Waste in Washington, D.C. The six groups are the American Public Health Association, the Environmental Action Foundation, the National Wildlife Federation, the League of Women Voters Education Fund, the Technical Information Project, and the Izaak Walton League of America.

John H. Romani, president of the American Public Health Association, said in his welcoming remarks at the conference that the six groups had gotten together on this project because "...individually and collectively, they have come to realize that the problems in this area have no easy solutions, nor can they be dealt with by focusing only on one aspect of the issue. Handling the problems in waste disposal depends ultimately on how citizens, business people, scientists, public officials, and others are able, in their own communities, to create the mechanisms needed to manage solid wastes. . ."

EPA is funding this program as part of its continuing commitment to public education and citizen participation. On February 16, 1979 regulations were published by EPA outlining citizen participation requirements for programs under the Clean Water Act, the Safe Drinking Water Act, and RCRA. Waste Alert! is a first step to educate citizens on the issues, so that they can go back to their own communities and participate meaningfully, effectively, and more knowledgeably in waste management decisions at the State, local, and Federal levels.

In fact, more than anything, the theme at Waste Alert! was public participation. Citizens wanted to know, "How can I get involved?" and "What can I do in my local community?" A speaker from EPA's Regional office in Chicago helped answer these questions by describing the new Public Participation Regulations. A workshop on citizen group's use of the media was well attended. Dean Hansell, an assistant attorney general for the State of Illinois, described how citizens could use legal action in their attempts to protect themselves and the environment from possibly hazardous facilities or activities. Jeff Dauphin, an engineer with the West Michigan Environmental Action Council (WMEAC), described how WMEAC and others were able to get nearly unanimous support for Michigan's new Hazardous Waste Management Act in the State legislature.

The last day of the conference was devoted to a planning workshop for organizing statewide committees on solid hazardous waste. Conference participants broke into State groups and developed goals and strategies in preparation for Fiscal Year 1980 State Solid Waste Planning activities mandated under RCRA. Following up on Waste Alert!, Region V is working with its States to plan State Waste Alert! conferences for 1980.

As EPA Regional Administrator John McGuire said in his keynote address for the conference: "The public has a major role to play in waste management. If it will take the combined efforts of government at all levels to solve solid and hazardous waste problems, it will also take the concern of citizens if the solutions are to be effective."

Art Baden is a Public Information Specialist for EPA Region V.

For more information on how you can get involved in upcoming State Waste Alert! conferences, or to find out about other public participation activities in your State, contact EPA or your State solid waste program, listed on the next page

WASTE ALERT CONT'D

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For Your Convenience:

UPDATED EPA NUMBERS

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Deputy Regional Administrator	*Valdas Adamkus*	*353-2000*
FOR MEDIA, THE GENERAL PUBLIC, AND THE HOPELESSLY CONFUSED	*Frank Corrado*	*353-2072*
Library	*Lou Tilley*	*353-2022*
Legal Problems	*Thomas Harrison*	*353-2016*
Minority Contract Compliance for GovernmentContractors	*Frances Wilkins*	*353-2320*
Research & Development Grants	*Clifford Risley*	*886-4625*
MANAGEMENT DIVISION	*VACANT*	*353-2024*
Looking for Work?	*James Byrne*	*353-2026*
Graphics	*Birute Bulota*	*353-2059*
AIR & HAZARDOUS MATERIALS	*David Kee*	*353-2211*
Solid Waste Management	*Karl Klepitsch*	*353-2197*
Pesticides	*Mitchell Writch*	*353-2192*
Pesticides Poisoning	*Curtis Golden*	*353-2193*
Toxic Substances and Related Health Problems	*Karl Bremer*	*353-2291*
Air Pollution Standards	*Steve Rothblatt*	*886-6030*
GREAT LAKES NATIONAL PROGRAM OFFICE	*Madonna McGrath, Acting*	*353-3544*
Surveillance & Research	*Robert Bowden*	*353-1369*
Remedial Programs	*Howard Zar*	*353-3503*
Environmental Planning (Including 108 planning)	*Madonna McGrath*	*353-3544*
WATER DIVISION	*Charles Sutfin*	*353-2147*
Construction Grants	*Todd Cayer*	*353-2160*
Environmental Engineering	*Gary Williams*	*353-2123*
Facilities Planning	*Eugene Chaiken*	*353-2124*
Water Planning	*Kent Fuller*	*353-2154*
Environmental Impact Statements	*Eugene Wojcik*	*353-2157*
Water Quality Standards	*Bob Pearson*	*353-2155*
Local Water Supply Problems	*Joseph Harrison*	*353-2151*
ENFORCEMENT DIVISION	*Sandra Gardebring*	*353-2076*
Water, Pesticides Enforcement	*Dale Bryson, Acting*	*353-2076*
Air Enforcement	*David Ullrich, Acting*	*353-2082*
Wastewater & Discharge Permits	*Al Manzardo*	*353-2102*
Compliance	*Arnold Leder*	*353-2114*
SURVEILLANCE & ANALYSIS DIVISION	*William Sanders III*	*353-3808*
How Good is the Air?	*Gerald Regan*	*353-2303*
EPA Comments on Environmental Impact Statements	*Ronald Mustard*	*353-0365*
Emergency Spills	*Russell Diefenbach*	*353-2316*
Emergency Spills	*Lee Townsent*	*353-9773*
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Eastern District Office (OH/MI)	*Alfons Winklhofer*	*(206)293-7260*
Western District Office (MN/WI)	*Clarence Oster*	*(612)725-3272*

BRIEFS • BRIEFS • BRIEFS • BRIEFS

TWO COMPLAINTS FILED AGAINST GREAT LAKES STEEL

Citing alleged violations of both the Clean Air and the Clean Water Acts, EPA's Region V office filed two complaints in Detroit against Great Lakes Steel Co. in mid-August.

Listed as sources of air pollution were three coke batteries, two basic oxygen furnace shops, an electric arc shop, and a cinter plant. On the water pollution side, the blast furnace and mill operations were cited as deficient in that the company failed to install best practicable technology by July 1977, as required.

In both instances, EPA seeks to expedite and supplement pollution control programs as well as to collect the applicable penalties.

BENZENE STUDY UNDER WAY IN ST. LOUIS AREA

How much benzene is carried in the human body? At what level is benzene detected? How much of it is there in the air? Answers to these and other questions are being sought by a study now under way in St. Louis, Missouri and Madison County, Illinois.

The study, sponsored by EPA and conducted by the Research Triangle Institute, is collecting samples from the surrounding air and from drinking water in homes. Seventy-five carefully selected volunteers are participating in this study. They will answer a questionnaire and give blood and breath samples for analysis.

Benzene is a by-product of gasoline refining and has been linked with leukemia.

COPPERWELD STEEL SETTLES OUT OF COURT

EPA and the U.S. Attorney for the Northern District of Ohio have settled a lawsuit against the Copperweld Co., which agreed to clean up wastewater at its Warren, Ohio plant. In addition, the company agreed to pay a $50,000 fine to the U.S. Treasury for violating the Clean Water Act.

Copperweld is installing a horseshoe-shaped lagoon in which the plant's wastewater will go through a settling process. Once the pollutants are removed, the water will be recycled at the plant. The lagoon, which will be operational by mid-1980, will prevent pollutants such as oil, grease, and solid waste from being discharged into the Mahoning River.

The suit against Copperweld was filed on March 30, 1978. It asked for a cleanup schedule plus a civil penalty.

COLCHICINE SALES STOPPED, RECALL ORDERED

An inquiry from a writer for the "Quincy" TV show has prompted EPA's Region V office to issue a stop-sale notice and a recall order to the Green Gourmet, a Detroit company. The firm has been marketing by mail a growth regulator, called colchicine, which is supposed to stimulate the growth of marijuana plants.

By failing to register colchicine, the company was in violation of the Federal Insecticide, Fungicide, and Rodentcide Act. EPA's action prohibits the company from selling, using, or removing the colchicine in its possession. The company must also recall colchicine it had sold.

Colchicine, a potent drug normally used for the treatment of gout and as a pain killer, can present a serious health hazard. As advertised by the Detroit company, colchicine was intended to be sprayed on marijuana plants.

Writer Jeff Freilich, who called EPA's attention to the drug, later wrote an episode for the "Quincy" show in which the problem of sprayed-on colchicine is dramatized.

INDIANA'S O & M AWARD GOES TO SOUTH BEND

The first EPA Operation and Maintenance (O & M) award in the State of Indiana went to the South Bend Wastewater Treatment Plant. Certificates were presented by EPA to the mayor, the plant manager, and certain employees of the plant on August 27.

The water pollution control facility was cited for its overall excellent operation and maintenance and its pioneering scum burner, the first of its type in the Nation. The plant's second innovative feature, a 50-million-gallon sludge farm was also singled out for praise.

EPA's O & M awards aim to upgrade the public image of wastewater treatment plant operators and to improve all-around performance of wastewater treatment facilities in the Midwest Region.

BRIEFS • BRIEFS • BRIEFS • BRIEFS

TRANSIT OIL HIT BY LAWSUIT FOR POLLUTING AIR

At Region V EPA's request, the U.S. Attorney for Southern Indiana filed a lawsuit against the Transit Oil Co. for violations of the Clean Air Act. The company's gasoline storage and transfer facility in New Albany, Indiana was cited in the suit for allegedly excessive hydrocarbon emissions. The purpose of the suit is to clean up air pollution at the facility. To do so, vapor reduction and vapor recovery systems must by installed, according to the suit.

EPA is asking for a court-imposed cleanup schedule, plus civil penalties of $25,000 for each day of violation.

NEW EPA REGS AIM TO CUT NO^2 FROM INTERNAL-COMBUSTION ENGINES

New regulations proposed by EPA would reduce nitrogen dioxide (NO^2) emissions from a variety of internal-combustion engines by 160,000 tons (or 40 percent) by 1988. The engines, used mainly to pump oil and natural gas through pipelines and to supplement power generation at electric plants, are now responsible for 16 percent of all NO^2 emissions in the Nation that come from stationary sources.

NO^2 emissions from diesel and dual-fuel (gas and liquid) engines would be limited to 600 parts per million; from gas engines, to 700 parts per million. NO^2 is a polluting gas that can contribute to bronchitis and pheumonia in humans.

Proposed effective date of these rules is January 1982. They would apply to new stationary engines only, or to those that have been modified or reconstructed.

INDIANA NURSING HOME, 20 TRAILER PARKS CITED FOR NOT TESTING WATER

According to an EPA advisory issued last month, 20 Indiana mobile home parks and 1 nursing home have not been testing their drinking water as required by Federal regulations.

These facilities have not had their monthly water samples analyzed for coliform bacteria for at least six months preceding August 7, 1979 and therefore were not meeting Federal standards for safe drinking water:

Pioneer Village Mobile Home Park, LaPorte....Shady Grove Mobile Home Park, LaPorte....Farmersville Mobile Home Park, Mt. Vernon...Lancaster Mobile Home Park, Monticello....Golden Rule Nursing Home, Danville....Roundhouse Mobile Home Park, Indianapolis....Morrison's Mobile Home Park, Danville....North Pine Estates Mobile Home Park, Terre Haute....Pine Forest Mobile Home Park, Terre Haute....Pleasant Valley Mobile Home Park, Logansport....

Midway Mobile Home Park, LaPorte....Colonial Mobile Home Park, Michigan City....White Horse Mobile Home Park, Decatur...Ciscell Mobile Home Park, Jonesboro....Lincoln Manor Mobile Home Park, Marion....Golden Pebble Mobile Home Park, New Castle....Smitty's Mobile Home Park, New Castle....Peartree Mobile Home Park, Alexandria....Mills Lake Mobile Home Park, Farmland...Lor Mer Acres Mobile Home Park, Wabash...Stony Creek Mobile Home Park, Zanesville.

The monitoring of water samples, including bacterial analysis, is required by the National Interim Primary Drinking Water Regulations. Also, the Safe Drinking Water Act requires that water suppliers notify their customers whenever they fail to make the necessary tests.

SUIT FILED TO CLEAN UP AIR AT TWO ILLINOIS TEXACO FACILITIES

A civil lawsuit filed by EPA's Midwest Office against two Texaco Inc. facilities seeks to force the installation of vapor recovery equipment that would reduce pollution...and then save the company 75,000 gallons of gasoline a year, gasoline that has been literally going up into the air.

The overhead submerged-fill method of loading gasoline tanks trucks at the Arlington Heights and East Peoria, Illinois, terminals emits more hydrocarbons into the air than regulations allow, the suit alleges. It also says that public health and welfare will suffer unless Texaco is restrained. Reliable equipment that can reduce hydrocarbon (gasoline) vapors to acceptable levels is available, EPA pointed out.

The suit is also asking a penalty of $25,000 for each day of non-compliance ... retroactive to August 7, 1977, the date Clean Air Act Amendments became law.

EPA

News Around The Region

ILLINOIS

- Illinois EPA's Emergency Action handled a **record 394 environmental emergency reports** during the first six months of the year . . . almost twice the number it handled for the same period in 1978.
- Three military facilities — the **Joliet Arsenal**, the **Rock Island Arsenal**, and the **Savannah Army Depot** — have been used as dump sites for potentially dangerous chemicals, Illinois Attorney General William Scott said. Army investigators made the discovery . . . they're trying to identify the chemicals and their possible toxicity.
- More than **$32 million**, mostly for upgrading of sewage treatment facilities, was granted by the Illinois EPA to communities throughout the State. The figure represents grants for State fiscal year 1979 that ended June 30. Most of the money came from the sale of State antipollution bonds. Communities receiving grants included **Batavia, Grayslake, Highland Park, Lake Villa, Manhattan, and Zion.**

WISCONSIN

- Department of Natural Resources has approved **Dane County's** water quality management (208) plan and sent it to the governor with recommendation. Next step . . . certification by U.S. EPA. The plan was prepared by the Dane County Regional Planning Commission in Madison.
- U.S. Fish and Wildlife Service bought almost 4,800 acres of virgin land along the Mississippi . . . increasing the **Trempealeau Wildlife Refuge** . . . north of LaCrosse . . . eight-fold. The cost . . . $875,000. Some 30,000 ducks and several thousand geese make their temporary home here during annual migrations.
- Bong Air Force Base, 30 miles southwest of Milwaukee, has been turned into an **urban recreation area** . . . the State's first.

MINNESOTA

- What parts of the **Voyageurs National Park** should be designated as wilderness areas? That's the big question Congress will have to answer. In the meantime, environmentalists have registered strong opposition to proposed **hunting** in the Black Bay area of the park. No **snowmobiles** or **seaplanes** on Kabetogema Pensinsula either, they say.
- Two groups of protesters have asked the State's Pollution Control Agency (PCA) to reduce **noise at the Brainerd International Raceway.** PCA's survey showed noise is excessive . . . PCA is studying the complaint.
- A ruptured sewer line at **Mankato** caused a 12-day discharge of raw sewage into the **Minnesota River.** Heavy rains reduced the impact of sewage on aquatic life.
- A public hearing was held on the draft EIS for the **Green Lake Sanitary and Water District** by EPA on August 4, 1979. Almost 200 people attended and expressed near-unanimous support for the alternative technology cluster systems/partial sewering options. Estimates are that these approaches will cost 40% less than a conventional sewer and treatment plant option . . . and will have less environmental impact.

OHIO

- The good old days of fishing in **Lake Erie** are back, fishermen say, hauling in impressive catches of **walleyes . . . smallmouth bass** and **perch** too. Green slime on water is gone . . . pollution cleanup efforts of recent years really helped, fishermen around Sandusky agree. EPA's **Great Lakes National Program Office** is finishing its second year of intensive water quality monitoring aboard the Research Vessel *Crockett.*
- Conservationists collected **118,009 signatures** in a move to put the 10-cent **bottle deposit bill** on the November 6 ballot. The bill is opposed by industry and labor . . .
- Plans were announced for a $10 million water treatment plant in **Massillon** . . . Republic Steel's Enduro Division will have it operational by mid-1981. The plant will treat up to 1.2 million gallons of wastewater per day.

INDIANA

- Large explosion at an industrial plant in Hammond released **30,000 gallons of tar** into the sewer system . . . crippling the wastewater plant, which had to release about **22 million gallons of raw sewage** into the Grand Calumet River.
- **Central Soya Co.** of Decatur was **fined $54,000** by the Indiana Stream Pollution Control Board for failure to limit phosphorous and suspended solids discharges from its plant.
- Construction plan permits for garbage disposal facilities at the South Alta Landfill, **Vermilion County**, and the Delaware Street transfer station, **Madison County**, have been OK'd by the State.

MICHIGAN

- Groveland Township's planning commission rejected a proposal by a Pennsylvania corporation to build a **hazardous waste disposal plant in Oakland County**, off I-75 and Grange Hall Road. The firm is going to court Sept. 17 to try to overturn the rejection.
- **A bill** regulating the hauling and disposal of hazardous industrial wastes has been approved by the State. A statewide plan, site approval committees, operating permits, periodic inspections, disposal records, and a **cleanup fund** from penalties are provided for.

CONSTRUCTION GRANTS

Applicant	Award Amount	Date
ILLINOIS		
Rock Island	$ 267,300	7/9
Homewood	63,375	7/9
Shipman	3,525	7/17
Bridgeview	73,125	7/10
Beecher	4,350	7/6
Farmersville	843	7/10
Northbrook	10,562	7/31
St. Charles	1,050	7/31
Wasco SD	7,350	7/9
Wheeling	58,500	7/18
Algonquin	36,975	7/12
Hillside	22,050	7/12
Hume-Metcalf	13,500	7/12
Vergennes	3,000	7/23
Ridgway	18,900	7/18
Mattoon	135,750	7/9
Newman	9,225	7/31
Gorham	3,000	7/30
Raymond	21,450	7/11
Northfield TWP.	75,150	7/9
Waynesville	14,100	7/9
MSD of Chicago	33,918	7/6
Sycamore	3,900	7/13
MSD of Chicago	5,654,025	7/10
Mt. Vernon	1,821,900	7/10
INDIANA		
Carmel	$ 66,150	7/17
Turkey Creek RSD	39,375	7/18
Monroe City	88,025	7/27
Delaware County RS	6,150	7/30
Independence Hill Conservancy	55,224	7/17
Fremont	5,384	7/17
MICHIGAN		
Newaygo County	$ 101,824	7/31
Washtenaw County	30,750	7/16
Charlotte	76,200	7/10
South Lyon	4,050	7/20
Berrien County DPW	8,561	7/31
Potterville	513,750	7/11
Mt. Pleasant	2,260,500	7/18
Grand Rapids	812,250	7/19
Clinton County	832,950	7/18
Wayne Cnty. Bd. of Rd. Comm.	$ 33,975	7/16
Genesee County	8,775	7/31
Calhoun County	14,625	7/30
Mackinaw City	48,900	7/25
Gobles	3,300	7/30
Pinckney	34,050	7/31
Reed City & Richmond T.	32,250	7/11
Markey Twp.	20,742	7/31
Ecorse Crk. Drnge. Dist. #1	232,500	7/13
Jackson County	78,750	7/20
Cass City	15,003	7/20
Lake Odessa	8,625	7/20
Genesee County	3,225	7/11
Oakley	21,300	7/27
Stockbridge	8,625	7/23
Alpena County		7/27
MINNESOTA		
Kenyon	$ 3,375	7/31
Albert Lea	48,300	7/6
Belgrade	5,250	7/24
Stewartville	2,250	7/25
Russell	19,350	7/31
Ely	12,825	7/23
Ortonville	18,075	7/20
Metro Waste Control Comm.	462,000	7/25
Pennock	15,450	7/12
New Pargue	36,900	7/12
Thief River Falls	60,750	7/31
Georgetown	9,600	7/12
Fertile	15,750	7/31
Plummer	18,000	7/18
Hoffman	33,225	7/12
Clarissa	17,700	7/18
Amboy City	24,150	7/18
Elbow Lake	13,350	7/13
Moose Lake & Windemere City	21,750	7/31
Connelly	24,075	7/18
Adrian	28,350	7/18
Sherburne	25,725	7/18
Emmons	25,575	7/18
Gary	29,100	7/31
Danvers	18,750	7/12
Ceylon	17,400	7/23
Preston	9,075	7/10
OHIO		
Hamilton	$ 39,225	7/6
Niles	900	7/10
Carrollton	12,525	7/6
Utica	23,175	7/17
Middle	5,625	7/9
Wellsville	55,350	7/6
Avon Lake	11,100	7/18
Wilmington	136,500	7/6
Smithfield	26,925	7/31
Shreve	23,625	7/26
Covington	7,800	7/25
Syracuse-Racine Reg. Sewer Dist.	6,075	7/23
Trumbull County	17,925	7/19
Clermont County	101,625	7/19
Montgomery County	1,033,950	7/10
Baltic	311,925	7/19
Ashley	10,875	7/31
Columbus	119,535	7/20
Obetz	316,800	7/31
Miamisburg	6,900	7/31
Clermont County	531,075	
WISCONSIN		
Plover	$ 1,002	7/23
Monroe	11,991	7/23
Oshkosh SD	3,600	7/25
Granton	525	7/18
Sheboygan	22,369	7/26
Platteville	5,250	7/25
Milwaukee	384,000	7/27
Butte Des Morts Util. Dist.	22,500	7/25
Crivitz	32,850	7/13
South Shore SD	19,875	7/31
Upper St. Croix Lake SD	9,225	7/30
Clear Lake	22,350	7/31
Denmark	3,750	7/10
Sheboygan Falls	3,688	7/17
Tomah	2,304	7/11
Independence	26,175	7/31
Cochrane	22,575	7/31
Greenwood	29,700	7/31
Coleman	39,000	7/27
Montreal	10,725	7/12
Northern Moraine Util. Comm.	87,600	7/27
Sheboygan	209,700	7/27
Depere	197,925	7/11
Pewaukee	147,150	7/16

ENVIRONMENTAL IMPACT STATEMENTS

Sponsoring Agency, Project Number Type of EIS	Project Location	Description	Summary of Comments	Comment Date Rating
Corps of Engineers 79-006-155 (Final)	Clear Creek, Franklin, OH	Stream channelization for flood control	Recommend reconsideration of 150-year bypass channel.	7/5 (Draft ER-2) 3/16/79
Fed. Highway Administration 76-037-421 (Final)	McClean, Woodford, Marshall, and LaSalle Counties, IL	Highway construction, FA Route 412	Previous comments adequately addressed.	7/5
Housing & Urban Development 79-022-1021 (Draft)	Schaumburg, IL	"Treehouse" housing development	Serious environmental concerns regarding floodplain impacts, lack of adequate water supply, and solid waste disposal facilities, noise impacts.	7/5 ER-2
Corps of Engineers 77-065-136 (Final)	West Harbor, OH	Recreational and navigational improvements	Previous comments adequately addressed.	7/13
Housing & Urban Development 79-015-1024 (Final)	Scott County, MN	Canterbury Square housing development	Previous comments adequately addressed.	7/11 (Draft ER-2)
Housing & Urban Development 78-083-1025 (Final)	Montgomery County, OH	Herbert C. Huber housing development	Effects of storm water runoff on Great Miami River not assessed. No mitigation of loss of prime agricultural land.	7/11 (Draft ER-2)
Fed. Hwy. Admin. 79-033-423 (Draft)	Montgomery County, MI	Highway construction, M-32 from M-33, east of Alpena County line	Concerns regarding wetland and prime agricultural land impacts, and potential for induced development. Believe Alternative "B" environmentally preferable route.	7/26 ER-2
Fed. Hwy. Admin. 79-031-424 (Draft)	Mounds View, Ankoka and Ramsey Cos., MN	Highway construction, New Trunk Highway 10	Concerns regarding potential noise and wetland impacts.	7/30 ER-2
Economic Development Administration 79-024-202 (Draft)	Jeffersonville, IN	Construction of family-oriented entertainment center on riverfront	Reservations regarding noise, water quality, and secondary impacts. Deficient assessment of impacts and discussion of mitigative measures.	7/30 ER-2
Corps of Engineers 79-020-133 (Draft)	Great Lakes	Survey study for navigation season extension	Environmental reservations regarding potential oil spill impacts, dredging, and wetland impacts. Need for additional studies on impacts and mitigative measures.	8/3 ER-2
Corps of Engineers 78-046-181 (Final)	New Athens, IL	Expansion of Pit #3	There are alternatives available which would avoid significant adverse wetland impacts.	7/20 (Draft ER-2)
Fed. Hwy. Admin. 79-030-424 (Draft)	Washington, Ramsey Counties, MN	Highway construction, Trunk Highway TH-120	Alternative using existing alignment environmentally preferable due to minimization of noise and wetland impacts.	7/27 ER-2
Housing & Urban Development 79-034-1022 (Draft)	Noblesville, IN	Sunblest subdivision	Environmental reservations regarding loss of prime agricultural land, potential for flooding in surrounding areas.	7/24 ER-2
Dept. Agricultural Forest Service 77-070-923 (Final)	Hiawatha National Forest, MI	Timber Resource Plan	Previous concerns adequately addressed.	7/23 (Draft LO-2)
Fed. Hwy. Admin. 77-086-421 (Final)	Madison County, IL	Highway relocation, FAP 789	Final noise report should include noise abatement measures.	7/24 (Draft ER-2)
Corps of Engineers 76-066-121 (Final)	Loves Park, IL	Flood control on large unnamed creek	Previous concerns adequately addressed.	7/28

CODE:
LO - Lack of objections or minor changes suggested.
ER- Environmental reservations on certain aspects of project; suggest preliminary determination of impact.
2-Insufficient information; EPA cannot fully assess project but can make further study of modifications or alternatives.

FEDERAL REGISTER

June 20, 1979 — Rules: Water pollution; effluent guidelines for certain point source categories: Canned and preserved fruits and vegetables; BAT guidelines removed. **June 21, 1979 — Proposed Rules**: Air quality implementation plans; approval and promulgation; various States, etc.: California. **Notices:** Environmental statements; availability, etc.: Encino Park housing project; San Antonio, Tex. Meetings: State FIFRA Issues Research and Evaluation Group. Pesticides; emergency exemption applications: Azinphos Methyl. BAMM. Diclofop. Heptachlor. Paraquat (2 documents). Permethrin and Fenvalerate. Propanil. Sodium Cyanide. Toxaphene. Triforine. Privacy Act; systems of records. Water quality standards; ,main stem of Ohio River; inquiry. **June 22, 1979 — Proposed Rules**: Air programs; assessment and collection of noncompliance penalties; extension of time. Air quality control regions; criteria and control techniques: Nevada; redesignation. Air quality implementation plans; delayed compliance orders: Ohio. Water pollution control: Judicial review under the Clean Water Act — forum shopping; commencing period. **Notices**: Environmental statements; availability, etc.: Agency statements; weekly receipts. Pesticide registration, cancellation, etc.: Hercon luretape with disparlure. Stemtrol liquid concentrate. Pesticides; tolerances in animal feeds and human food: Amchem Products; Inc. (2 documents). **June 25, 1979 — Proposed Rules:** Waste management, solid: Hazardous waste guidelines and standards; preliminary notification of activities; extension of time. **Notices**: Air programs; fuel and fuel additves: Sun Petroleum Products Co.; waiver application. Air quality implementation plans; approval and promulgation: New York; nonattainment areas; plan availability and inquiry. **June 26, 1979 — Proposed Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: District of Columbia. **June 27, 1979 — Rules:** Air quality implementation plans; delayed compliance orders: Florida. Ohio (2 documents). Grants, State and local **assistance:** Treatment works construction. **Proposed Rules:** Air quality control regions; criteria and control techniques: Attainment status designations. Air quality implementation plans; approval and promulgation; various States, etc.: Massachusetts. Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: Methomyl. Toxic substances: Reporting and recordkeeping; chemical, risk assessment; advance notice. **Notices:** Meetings: Interagency Toxic Substances Data Committee; date and location change. Pesticides, experimental use permit applications: N-(2,6-dimethylphenyl)-N-(methoxyacetyl)-alanine methyl ester. Sodium salt of glyphosate. Pesticides; tolerances in animal feeds and human food: Chevron Chemical Co. Mobay Chemical Corp. Sumitomo Chemical America, Inc. **June 28, 1979 — Proposed Rules:** Air pollution; standards of performance for new stationary sources: Fossil-fuel-fired industrial steam generators. **Notices:** Air pollution control: Clean Air Act; restrictions on new source construction and Federal funding sanctions. Air quality implementation plans; approval and promulgation: New York; nonattainment areas; plan availability. Meetings: Municipal Construction Division Management Advisory Group. Pesticides; tolerances in animal feeds and human food: Acephate. Toxic substances: Health effects test standards; meeting postponement. **June 29, 1979 — Rules**: Air pollution; ambient air monitoring reference and equivalent methods: Lead. National Primary and Secondary Ambient Air Quality Standard for Lead; correction. Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: Editorial amendments. **Proposed Rules**: Air pollution; standards of performance for new stationary sources: Fossil fuel/fired steam generators; adjustment of opacity standard. Air quality implementation plans; delayed compliance orders: Utah. Air quality implementation plans; approval and promulgation; various States, etc.: Rhode Island; advance notice. **Notices**: Environmental statements; availability, etc.: Agency statements; weekly receipts. **July 2, 1979 — Rules**: Air quality implementation plans; approval and promulgation: State plans; nonattainment areas; statutory restriction on construction of new sources. Air quality implementation plans; approval and promulgation; various States, etc.: New Jersey; correction. Wyoming. Air quality implementation plans; delayed compliance orders: Indiana. **Proposed Rules**: Air quality control regions; criteria and control techniques: Attainment status designations. Air quality implementation plans; approval and promulgation: Nonattainment areas; evaluation of plan revision submissions; supplement. State implementation plans; nonattainment areas; statutory restriction on new sources. Air quality implementation plans; approval and promulgation; various States, etc.: Florida. Illinois. Minnesota. South Carolina. Air quality implementation plans; delayed compliance orders: Pennsylvania. Sewage treatment grant limitations; memorandum of interim policy and procedures; advance notice. Water pollution; effluent guidelines for certain point source categories: Leather tanning and finishing. **Notices**: Air pollution control; new motor vehicles and engines: California; waiver. Radiation exposure due to Radium-226 in Florida phosphate lands; recommendations and inquiry. **July 3, 1979 — Rules**: Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: Malathion. Methomyl. Methyl 3-[(dimethoxyphonphinyl)oxy]butenoate. Air quality implementation plans; approval and promulgation; various States, etc.: Maine. Pesticides; tolerances in animal feeds and human food: 3,5-Dimethyl-4-(methylthio) phenyl methylcarbamate. Pesticides; tolerances in food: Propargite. **Proposed Rules**: Air quality implementation plans; approval and promulgation; various States, etc.: California. **Notices**: Meetings: Federal Insecticide, Fungicide, and Rodenticide Scientific Advisory Panel. Science Advisory Board. Pesticides; emergency exemption applications: Avitrol. Goal 2E. Guthion. Pesticide registration, cancellation, etc.: Blazer 2S. Goal 2E Herbicide. Metalaxyl. Permethrin (2 documents). Pesticides; tolerances in animal feeds and human foods: Mobay Chemical Corp. Toxic and hazardous substances control: Premanufacture notification period; extension. **July 5, 1979 — Rules**: Grants, State and local assistance: Treatment works construction; republication. **Proposed Rules**: Air quality implementation plans; approval and promulgation; various States, etc.: Arizona. **Notices**: Air quality criteria: Chlorinated hydrocarbons; inquiry. **July 6, 1979 — Rules**: Air programs; fuel additives: Assessment of civil penalties. Water pollution; effluent guidelines for certain point source categories: Coal mining; catastrophic precipitation exemption; temporary suspension. **Proposed Rules**: Air quality implementation plans; approval and promulgation; various States, etc.: Arizona. Oregon. Wisconsin. Air quality control regions, criteria, and control techniques: Attainment status designations. Water quality standards; State programs: Ohio. **Notices**: Air pollution control; new motor vehicles and engines: 1981 light-duty vehicles (diesel) NOx emission standards. Carcinogens, scientific report, identification and estimation of risks; inquiry. Meetings: Science Advisory Board (2 documents). Pesticides; emergency exemption applications: Atrazine. Permethrin and fenvalerate. Terramycin. Pesticides, experimental use permit applications: N-tetradecyl formate, etc.; correction. **July 9, 1979 — Proposed Rules**: Air quality implementation plans; approval and promulgation; various States, etc.: Vermont. **Notices**: Environmental statements; availability, etc.: Agency statements, weekly receipts. Toxic and hazardous substances control: Herbicide registrations; Velsicol Chemical Corp.; hearing. PCB-contaminated soil and debris disposal; citizens' petition; denial. **July 10, 1979 — Rules**: Pesticides, tolerances in animal feeds: 4-Amino-6(1,1-dimethylethyl)-3-(methylthio)-1,2,4-triazin-5(4*H*)-one. *O,O*-Dimethyl *O*-(4-nitro-*m*-tolyl) phosphorothioate. **Proposed Rules**: Air. quality implementation plans; approval and promulgation; various States, etc.: Connecticut. Idaho. Wisconsin. Air quality implementation plans; preparation, adoption, and submittal: Tall stacks; fluid modeling guidance. **Notices**: Air quality implementation plans; approval and promulgation: Prevention of significant air quality deterioration (PSD); permits. Pesticides; emergency exemption applications: Mesurol. Pesticide registration, cancellation, etc.: Ultra low volume application; advisory opinion. Pesticides; emergency exemption applications: Azinphos methyl. Bayleton 50% WP. Fenvalerate. Permethrin. Propanil. **July 11, 1979 — Proposed Rules:** Water pollution control: State underground injection control program; extension of time. **Notices:** Air quality criteria: Oxides of nitrogen; external review draft; availability. Environmental statements; availability, etc.: Agency statements, weekly receipts. Non-community water systems; Safe Drinking Water Act implementation strategy. Pesticide registration cancellation, etc.: Ciba-Geigy Corp. et al. J. T. Baker Chemical Co. Koppers Co., Inc., et al. **July 12, 1979 — Proposed Rules:** Air pollution control, new motor vehicle and engines: Light-duty trucks; gaseous emission regulations. 1983 and later model years. Air quality implementation plans; approval and promulgation; various States, etc.: Michigan. **Notices:** Air pollutants, hazardous; National emission standards: Illinois; State implementation plan, deficiency. Air pollution control: EPA-measured vs. in-use fuel economy; report to Congress; inquiry. Federal Insecticide, Fungicide, and Rodenticide Act; enforcement policy regarding failures to report information. Pesticides, emergency exemption applications: Oryzalin. **July 13, 1979 — Proposed Rules:** Air quality implementation plans; approval and promulgation; various States, etc.: South Carolina. Toxic substances control: Sprayed asbestos in schools; rulemaking petition. Water pollution control: Consolidated permit regulations and underground injection control regulations; hearings.

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1979 calendar

SEPTEMBER 10-11
INNOVATIVE AND ALTERNATIVE TECHNOLOGY ASSESSMENT. Emphasis on regulations, policies, and procedures with which consulting engineers must be familiar to help municipal clients comply with and take advantage of the various technology provisions of the Clean Air Act. Playboy Towers, **Chicago, IL.** Contact U.S. EPA c/o Jaca Corp., 550 Pinetown Rd., Ft. Washington, PA 19034.

SEPTEMBER 12
GOVERNMENT'S ROLE IN RESOURCE RECOVERY. Covered will be national legislation, policy of Federal agencies, Federal agency programs, and State and local agencies. International Club, **Washington, DC.** Fee ($100) includes all costs. Contact Resource Recovery Report, 1707 H Street NW, Washington, DC 20006; (202) 338-4746.

SEPTEMBER 11-12
AN IMPLEMENTATION SEMINAR by EPA's Resource and Recovery Division, with the National Association of Counties, the National League of Cities, and the U.S. Conference of Mayors. Primarily for municipal and county officials, professionals, and private citizens interested in gaining a better understanding of current municipal solid waste resource recovery and conservation practices. Palmer House, **Chicago, IL.** Registration fee ($75) does not include hotel accommodations. Contact EPA Resource Recovery Seminar, PO Box 17413, Dulles Int'l. Airport, Washington, DC. Or phone the Convention Registration Center, (703) 471-6108.

SEPTEMBER 25-27
4TH INLAND SPILLS CONFERENCE. Sponsored by Ohio EPA and nine other State, Federal, and private agencies. Handling hazardous material emergencies and practical oil spill response: the basics, which includes hands-on approach. (Bring boots and work clothes.) Representatives from U.S. EPA, Coast Guard, and private industry will speak on related topics. Marriott Inn Airport, **Cleveland, OH.** Fee $15. Contact Marilyn Brizz, Ohio EPA, PO Box 1049, Columbus, OH 43216; (614) 466-8820.

OCTOBER 2
BIOLOGICAL MONITORING AND ITS USE IN EPA REGION V NPDES PERMIT PROGRAM. Sponsored by EPA in cooperation with Region V States. A workshop of national experts' presentations on biomonitoring test strategies. Advance registration required, but no fee. Conrad Hilton, **Chicago, IL.** Contact Timothy O'Mara, U.S. EPA Region V, Enforcement Division, 230 S. Dearborn St., Chicago, IL 60604; (312) 886-6115.

OCTOBER 22-24
RIVER BASIN WATER PLANNING AND MANAGEMENT. A joint U.S./U.S.S.R. symposium, with focus on comparative studies of the water protection planning methods and approaches of both countries, stressing the technological, regulatory, and institutional constraints. Also, some of Soviets' treatment technologies and pollution abatement methods not generally applied in the U.S. will be presented. Representatives of the Soviet equivalent of EPA will participate. **Cambridge, MA.** Open to anyone interested. Contact Sharon Moore, Water Quality Branch, U.S. EPA Region I, JFK Federal Building, Boston, MA 02203; (617) 223-5130.

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OCTOBER - NOVEMBER 1979

EPA ENVIRONMENT MIDWEST

PCBs REVISITED: See special update beginning on p. 10

Deputy is bringing peace and quiet to Evansville

By NANCY SHULINS
Associated Press Writer

EVANSVILLE, Ind. (AP)— It's 3 a.m. before the lone lawman finally gets his man within range.

He springs from his wooded hiding place and before the outlaw can make a move, he draws and aims.

Zap! Eighty-five decibels at 50 feet. "Sorry, buddy," drawls deputy sheriff Buster Gordon. "You are gonna hafta get you a new muffler."

So ends another suburban showdown between Gordon and the enemy—the faulty mufflers, wailing stereos and buzzsaw lawnmowers that keep his neighbors awake at night.

With his visored helmet, dusty boots and police motorcycle, the 45-year-old Evansville native looks like a California highway patrolman who has taken a wrong turn on his way to LA.

But he packs a noise detector, not a pistol, and he'd be the first to tell you that there's nothing he loves better than peace and quiet.

In the nine months that Gordon has been enforcing Vanderburgh County's ordinance, more than 300 offenders have been brought to justice, and Gordon has risen to the rank of hero among local insomniacs.

"Go get them, Buster," crowed an editorial in a local newspaper. "Buster made me a believer," pronounced Mayor Russell G. Lloyd. "We need more Buster Gordons in our society today," extolled an Evansville radio station.

Who is Buster Gordon?

He's a former Hell's Angel and a registered nurse, a disabled iron worker and an airplane pilot. By day, he's a mild-mannered field enforcement officer for the local environmental protection agency.

By night, he's a volunteer vigilante in this southwestern Indiana county's war against noise.

His dedication is unwavering, and his law is simple: "Thou shalt not make noise." If thou dost, thou shalt pay through thy nose— from as little as $25 up to $1,000 for a single violation.

To determine whether a citation is warranted, Gordon stands 50 feet from the source of the disruption and turns on his noise detector. If it registers 85 decibels or more, it is deemed unlawful.

Asking Buster Gordon what's so bad about noise is like asking a Ford dealer why he doesn't drive a Chevy.

"Noise pollution destroys hearing, and it can cause neurosis and psychosis," he begins. "It makes you irritable and it makes you mean. And people are getting meaner all the time."

If that argument doesn't sway you, he'll pull out his calculator and try the scientific approach.

"Suppose it's 2 in the morning and one loud motorcycle is cruising the streets. Suppose there are 12 houses to a block and at least two people to a house.

"In the course of three hours, that biker is going to drive 17,400 people bananas. And one of them could be you."

Why do people make noise?

Gordon will tell you that too.

"A lot of kids have nothing else to do. They drive around on a new motorcycle or in a $9,000 van and they're saying 'Look at me.'

"They want to draw attention to themselves, to be different, to be special. That's why they put heel plates on their boots and why they rev their engines."

Gordon looks down at his own boots and flashes his engaging grin. "The reason I know so much about it is because I'm describing myself. You see,"

EPA

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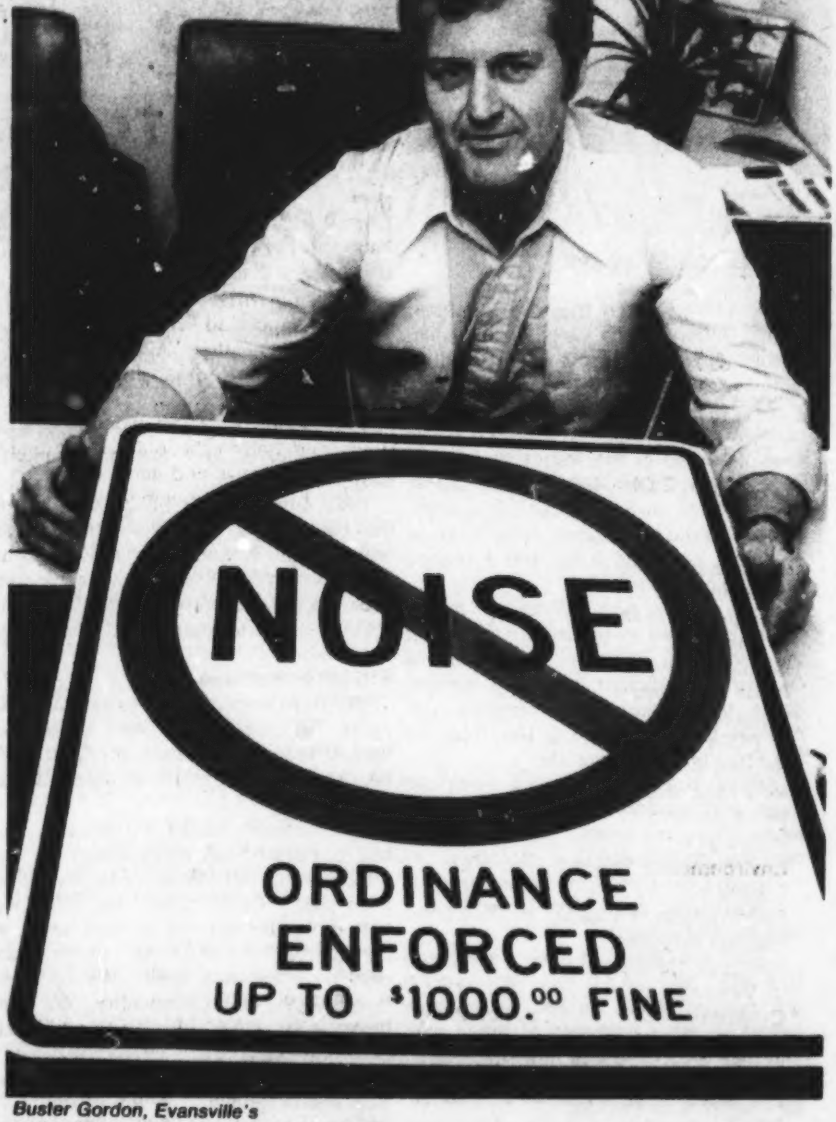

Buster Gordon, Evansville's anti-noise crusader.

he confides, "I got heel plates on my shoes, too."

That, says one of Gordon's advocates, is one reason why he succeeds.

Gary Winn, a legislative analyst for the Ohio-based American Motorcycle Association, is trying to spread the word about Gordon's program.

"Buster Gordon has singlehandedly cleaned up the streets of Evansville, and it's not because he's running around in a cop suit," Winn says.

"The reason is because he knows motorcycles and he knows motorcycle language. When he talks to the bikers, they understand him. He's a 25-year member of the association, for God's sake."

Winn says that most cities fighting noise pollution "try to cure the disease by killing the patient."

"They either try to ban motorcycles outright or they try to solve the problem by throwing money at it. All they really need is someone like Buster."

City officials from as far away as Anchorage, Alaska, apparently are beginning to agree. Cambridge, Mass., Louisville, Ky., and Saginaw, Mich., also number among the cities that have requested information about the Evansville program.

Meanwhile, Gordon, with the help of state Rep. Gregory Server, an Evansville Republican, is hatching a plot to take his ordinance to the Indiana legislature with an eye toward seeing it implemented statewide.

"It's a good, fair ordinance, and it's directed at people like me," says Gordon, who likes to think of himself as a champion of the little people.

"I love bikes and I love bikers. All they do wrong is make noise. And I love to bust the noisy ones, because they're giving people like me a bad name."

The pickings are getting slim for Gordon, who describes Evansville streets as "99 percent quieter than they used to be." But he says his work in the city is far from over.

Next on his hit list are firecrackers, faulty air compressors and loud parties.

The people of Evansville are applauding.

Very quietly.

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THE PRESIDENT COMES TO

By R. John Rapsys

It isn't very often that the President of the United States visits Steubenville, a solid steel and coal town in eastern Ohio.

When President William Howard Taft came to Steubenville in 1912, he never even dreamed of the issues that President Jimmy Carter was to face during his visit here on September 12: energy, environmental regulations, sulfur dioxide pollution, coal and jobs, and synthetic fuels, among others.

The entire population of some 30,000 seemed to be on hand to greet the President. Busloads of people, including a contingent of angry miners, came from nearby communities and swelled the crowd lining the route of the Presidential motorcade.

Among the sea of waving American flags and welcome signs and smiling faces, there were other signs vying for attention on that dog-day afternoon.

"Burn Ohio coal!" the signs said.

"Burn Ohio coal!" the crowd chanted time and again.

"Why are Ohio coal miners still being laid off?" and "What has Federal EPA got against Ohio?" asked other signs reflecting the sentiments of those who lost their jobs or feared of losing them.

Coal and jobs were definitely the major concerns of the day.

The auditorium of Steubenville High School, known as Big Red, was jammed with 1,500 people when the Presidential town meeting began at 3 p.m. A high school band, as if in consolation, played to a large crowd that had to remain outside.

In his opening remarks, President Carter summarized how the steel industry has been strenghtened since he took office. We have taken steps to cut out dumping of foreign steel, to make more jobs, to modernize the American steel industry, and to reach an understanding with the EPA, so that the steel industry and EPA could work together "to accommodate the laws' requirements, but not to put handcuffs on the steel industry itself," he said.

There is room for profits, for environmental quality, and for cooperation between citizens and the government, Carter stressed.

"We import about 50 percent of all the oil we use, and we import along with that oil, inflation. We import unemployment. We will send overseas this year from our country about $70 billion that we ought to keep here," the President said.

$75 billion for coal

We have enough coal to last us 600 years, he pointed out, and suggested that instead of imported oil, Ohio coal be used. A thunderous applause broke out.

"In the years ahead, I predict we will see a tremendous improvement in the utilization of American coal, including Ohio coal," Carter said. "By 1995, we can triple the amount of coal used in this country. We can honor, in the process, environmental laws....We can enhance our Nation's security. We can have more jobs....less unemployment, less inflation."

The windfall profits tax will bring us $88 billion, and $75 billion of that sum will be spent on coal, to develop a synthetic fuel program, the President said. He urged the people to support his energy program now before Congress.

We have enhanced the safety of coal mines and the health of miners, he said, and there's a growing sense of cooperation between mine owners and mine workers.

This country is strong enough to withstand all challenges if we are willing to make common sacrifices without losing our confidence and to work in unity, Carter said.

The synthetic fuels process is going to take 8-10 years, he said. "In the meantime, we must save energy, stop wasting energy, use more coal, which we've already got."

The question and answer period, which lasted for the better part of the one-hour town meeting, heard people's concerns about gasohol, help to low-income families in paying their utility bills, possible luxury taxes on gas-guzzling cars, and nuclear energy. But the dominant themes were Ohio coal, jobs, and the EPA.

EPA standards must stand

In answer to the question of why EPA can't loosen its regulations so that more Ohio coal could be used, Carter said:

"The EPA standards...there are laws that bind the entire Nation on air pollution standards and water pollution standards. I don't think you would want to see these laws stricken down. Forty-nine States have submitted and have had approved an environmental program. One State in the Nation has not had an environmental program approved. That State happens to be Ohio.

"It's much better for the enforcement of environmental laws, or any other law, when you can have the cooperation of the State government and that basic management of the program be done by local and State officials instead of Federal officials. But the law requires that until the State gets an approved plan, the Federal government has to be involved in it...."

President Carter said he'll be eager to see Ohio get an approved environmental plan shortly, just like the other 49 States already have. He promised to do all he can, within environmental standards, to get utilities to burn more Ohio coal.

We have had some problems with Cleveland Electric, Carter said, but they

Steubenville, Ohio, welcomes Jimmy Carter and voices concerns over jobs and coal; receives Presidential reassurance in a town meeting.

TOWN

Photo Paul Gerard

Following the town meeting, President Carter receives a bouquet of roses at a reception held in The Fountain restaurant, Steubenville.

are now authorized to burn high-sulfur Ohio coal. "Most of the plants in Ohio have shifted so that they are qualified to burn Ohio coal. Others will be qualified by October 19....I hate to see Ohio importing coal...and I'm as eager as you are to obey the laws which I'm sworn to uphold, to turn over the responsibility to State and local officials to enforce the environmental laws, and to see a maximum use of Ohio coal," the President said.

To a coal miner whose mine has been shut down since August 31 and who said that mine workers "want to work now, not 10 years from now," Carter answered:

"I would like to see your mine working full time, all the mine workers employed, and Cleveland Electric using your coal on a sustained, permanent basis."

But..."it can't be done instantaneously...I guarantee it will not take 10 years to do it if we all work together." Carter said he was told that the mine would be shut down for only four weeks.

Ohio — still no approved plan

A wife of a a mine owner mentioned that 55 Ohio counties are in compliance with Federal clean air standards, so why doesn't EPA allow utilities and other industries to burn high-sulfur Ohio coal, she wanted to know.

Carter invited the mine owner's wife to Washington to attend a meeting to help solve the Ohio coal problem and asked to use her influence in getting Ohio to work together with EPA.

"It doesn't help anything for two and a half years to go by and for Ohio still to maintain, 'We don't like the Federal laws, therefore we're not going to comply.' What it means is that there's no

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THE PRESIDENT...

State input, and you're faced with well-meaning people from Washington trying to administer that law," the President said. He urged Ohio to resubmit its proposal for an environmental program so that EPA could approve it.

Another coal miner complained that mines in Ohio are being shut down because of EPA standards and that about 5,000 mine workers have been thrown out of jobs. "When can we expect some concrete solutions to the sulfur dioxide problems?" he wanted to know.

The President said that as soon as Congress acts on his energy proposals, all of us will enjoy the benefits from the increased use of coal. In the meantime, we must practice conservation and get more utilities to shift from oil to coal. The President's Coal Commission has recommended—and the EPA approved — 100 electric utilities for such a switch, Carter said.

"We are making progress, but we have a long way to go," he said. "But I feel that you and I are partners in making that progress. I'll help you if you'll help me," he told a cheering audience.

Big future for gasohol

On the subject of gasohol and other synthetic fuels, Carter said that much more research is being done and much more of such fuels are being used now than there were six or 12 months ago.

"There is a great deal of interest in gasohol and other energy from so-called biomass replenishable supplies," he said. "Biomass is a resource in our country that has not yet been tapped...It consists of growing things and what energy you can get from those products."

He mentioned wastes from timberlands and waste corn as good products for making ethanol. Brazil, for example, has been very successful in using the cassava root and sugarcane for the same purpose, the President pointed out.

"Gasohol will be a major industry, in my opinion, in this Nation in the future," he said.

"I don't believe that we will ever see a time in our Nation when gasoline is both plentiful and cheap....I don't believe that we'll go back in the American preference to the large, gas-guzzling, inefficient automobiles, so I believe we don't need a luxury tax on them," Carter said.

"It is a change taking place in our country....Our country has become aware of the fact that for the first time we have a limit on what God has given us and what we have a right to waste...." he said.

Conservation, the President said, is a challenge, but it is also an exciting and enjoyable opportunity that "tests American ingenuity and commitment on an individual basis."

He reminded the audience that militarily, economically, politically, morally, and ethically we still have the greatest country in the world. "Let's keep it that way," the President concluded.

Later, Carter told a group of local politicians that he thought the town meeting was a success because it brought him closer to the people. But he lamented that the will to work together, that spirit of unity, isn't there in America anymore.

However, he remained convinced that "when we work together, we can get things done."

R. John Rapsys is a writer with EPA Region V and editor of Environment Midwest.

WHITE HOUSE TACKLES OHIO COAL PROBLEM

The day after President Jimmy Carter's visit to Steubenville, a White House conference was held with Stuart Eizenstat, head of the President's Domestic Policy Office. The subject — Ohio's high-sulfur coal and the accompanying problems.

Among those attending were Barbara Blum, deputy administrator of EPA; John McGuire, administrator of EPA Region V (Midwest); Ohio Congressmen Applegate and Miller; Ohio Senator John Glenn; James McAvoy, chief of Ohio EPA; representatives of miners, coal producers, and Ohio utilities.

There was a special guest as well. She was Sandra Downend, wife of an Ohio coal mine operator, whom President Carter personally invited when he was in Steubenville.

"The idea was to get all these people in one room and try to solve the Ohio problem," said Dave Andrews, legal counsel and special assistant to EPA's Barbara Blum.

Acid rain, sulfur dioxide pollution in Ohio, and the fact that this pollution is creeping over the borders of neighboring States were brought out in the conference. Although Ohio has submitted its plan for sulfur dioxide to EPA just recently, that plan has to be reviewed and approved by EPA. Regional Administrator McGuire said the plan is now under review and results of that review will be made known to the State of Ohio as soon as possible.

DANGEROUS MATERIALS KEEP OUT
PER ORDER OF CITY OF LOWELL
NO TRESPASSING
VIOLATORS WILL BE PROSECUTED.
LPD

Michigan's Act 64: Hazardous waste siting and much more

By Art Baden

No State in the Midwest has had as intimate and emotional a relationship with toxic wastes as Michigan. In 1973, an error at a feed packing plant resulted in a fire-retardant containing polybrominated biphenyls (PBBs) being mixed into a feed additive and distributed for use by thousands of Michigan dairy farmers. Before this tragic error was caught, millions of Michiganders unknowingly ingested PBB contaminated meat, milk, and dairy products. Based on a random sample taken in the Kalamazoo area, the Michigan Department of Public Health estimates that over 95 percent of Michiganders have PBBs in their bodies.

The Michigan Department of Natural Resources (DNR) was given the responsibility for disposing of thousands of Michigan farm animals contaminated with the PBBs. DNR proposed burying the animals near Mio, Michigan, in a huge pit lined with 20 feet of compacted clay. DNR planned to spend over $1 million on this cow burial site, even though thousands of animals were previously buried in Kalkaska County. The citizens of Mio were up in arms against this plan. They didn't believe that DNR could guarantee the integrity of the burial pit. They were afraid that the PBBs

Years of cooperative efforts produce a comprehensive hazardous waste management law

hazardous waste....

would leak out of the pit, into their water table, and contaminate them.

DNR found itself trying to safely dispose of an environmental problem in the face of local fear that it would one day become Mio's problem. As one Michigan official said, "One day this hot potato is going to have to land somewhere!"

The PBB disaster is notable because it cost Michigan dairy farmers their herds and contaminated millions of Michiganders with low-level toxicants. It was most certainly a situation that shouldn't have occurred. Every year, however, millions of tons of toxic and other hazardous wastes are produced that aren't the result of mistakes. They are the chemical garbage of our highly industrialized, consumer society, and they too need proper disposal.

On July 25, 1979, Governor Milliken signed Act 64, Michigan's Hazardous Waste Management Act. This was the first State legislation in the country to deal specifically with the problem of siting hazardous waste disposal facilities. It established a nine-member siting board which will have the final word on disposal facility permits; it provided for a $20 million disposal facility trust fund for long-term care of these facilities; and it also established a $1 million hazardous waste emergency fund, to handle the immediate clean-up of any environmental damage incidents resulting from hazardous waste handling or disposal.

Act 64 is the result of years of work by legislators, State officials, lobbyists, and concerned citizens. In 1978, a precursor to Act 64 was working its way through the State legislature. That bill would have provided for a State-controlled hazardous waste disposal facility, but it did not pass through the legislature. According to Wayne Schmidt of the Michigan United Conservation Clubs, who worked with the legislature on both bills, "No one was excited about the State getting more involved in this than it had to: no one really wanted a State-controlled facility."

The aborted 1978 attempt caught the interest of the public, the legislature, and the governor. "The governor," said Schmidt, "made hazardous waste one of his priorities in 1979, and got out and pushed. He and the legislature recognized that hazardous waste was more than an environmental issue; it is a critical economic issue."

Photo by Leavenworth

Ecologist Wayne Schmidt

The 1979 legislature quickly set up the Special Legislative Waste Management Committee under Representative Thomas Mathieu to study the problem. Representative Tomboulian introduced the bill, which was eventually passed out of the committee.

This committee was effective in that it invited representatives from the spectrum of interest groups. The committee members, along with environmentalists, industry representatives, and other concerned citizens, went over Act 64 word by word, and line by line. Schmidt said, "It was a long, painful, and oftentimes boring process, but it worked. We at times would have up to 60 people at the committee sessions with open discussion all the way through."

He added, "This process succeeded because all the interest groups had the opportunity to talk themselves to death, so by the time the process was over, no one had anything left to say. In almost every instance, the group was able to reach a consensus; we all knew how important this bill was."

Donna Stein, on the staff of the special committee, said, "When Act 64 finally came out of that committee, after all of that deliberation, the full legislature just didn't want to monkey around with it. People who spoke out against the bill, who hadn't participated in the special committee, just weren't listened to. They had their chance." Act 64 passed the Michigan legislature by a nearly unanimous vote.

One of the characteristics of the bill is that it is extremely detailed. "We tried to write the legislation in as detailed a manner as we could," said Schmidt. "We wanted to resolve the controversial issues in the Act itself and not leave them up to the rule makers. The legislature wanted to provide explicit instructions to DNR in how this bill would be administered. They were reluctant to give more discretionary powers than necessary to the regulation writers and administrators at DNR."

At the request of Representative Mathieu, EPA was also involved in the development of Act 64. Joe Boyle, with EPA's Region V Hazardous Waste Management Section, was specifically assigned to follow developments in Michigan and worked with the special subcommittee. "My interest in the bill was two-fold" Boyle said. "I certainly wanted to see Michigan's citizenry take a confident, positive approach to hazardous waste management, but I also had a more pragmatic motive. When our Federal legislation for hazardous waste management (Resource Conservation and Recovery Act, or RCRA) becomes effective at the end of the year, States like Michigan will be applying to EPA

hazardous waste....

for authorization to administer and enforce the RCRA program. I tried to add a Federal perspective to the subcommittee's deliberations and keep the bill on a course that would make it all the more consistent with RCRA." Boyle added that, "Although the rules haven't been written for either RCRA or the Michigan Act, at this point the programs set forth in Act 64 seem very consistent with the Federal programs established under RCRA."

Act 64 does include many elements present in the Federal legislation. It establishes a manifest system, to track wastes from the generator, to the waste hauler, and to the ultimate disposal site. It authorizes DNR to write rules defining what wastes will be covered by this Act.

There are also many new elements in the bill. A State Hazardous Waste Management Planning Committee was created. This committee, consisting of waste management industry representatives, environmentalists, State officials, and others is charged with preparing a comprehensive State plan for hazardous waste management. The Act also outlines procedures for State takeover of closed disposal sites; covenants limiting the future use of disposal sites are required; enforcement powers and procedures are detailed.

The unique provision of the bill calls for the establishment of a nine-member site approval board to review each hazardous waste disposal site proposal that has been given the green light by DNR. This board has full authority to approve or deny a construction permit or to add additional stipulations to the permit.

The board consists of three members from State agencies, two from State universities, and four from local government. The three State agencies include the DNR, Public Health, and the State Police. The two members from State universities represent the fields of geology and chemical engineering. The State members constitute permanent positions. The four local government representatives are temporary positions that terminate following deliberation and action on a specific site. Two of the local positions are appointed by the municipality where the site is proposed, and two by the county.

The board's primary responsibility is to identify and attempt to mitigate local concerns regarding the proposal. The board must conduct a public hearing and consider the risk and impact of accidents, contamination and explosion, relationships with local planning and existing development, environmental impacts, and the concerns or objections of the local community. The board has final approval authority, and although it must consider local ordinances in making its decision, it is not bound by those ordinances for either the construction or the operation of the facility.

Across the country, people will be watching the workings of this board. One Illinois environmentalist said, "Those first few votes are critical. If the board comes up with a slew of five-to-four approvals, the permanent members over the locals, then the process will lose a lot of credibility. I hope they will be able to get at least one local to vote for an approval in those first critical votes."

Wayne Schmidt doesn't know whether five-to-four decisions will take place or not. "The consensus in the special committee was, you can't give the community veto power over a site," he said. Donna Stein, however, said, "There is no way a local politician can vote for a site and get re-elected. I have a feeling we'll never get the local votes." She added that this doesn't take away from the usefulness of the board. "Local members can add stipulations on the site approval, like the hours of operation. The process gives the community the opportunity for significant input," she said. And Schmidt said that "Communities will know right away that a site is being considered and that they have full opportunity to participate."

Roy Barnes, who represented the Michigan liquid industrial waste haulers and the Michigan Chemical Council, feels that this process can work. "The passage of this bill means that the mechanism is in place," said Barnes. "The problem is, can we encourage industry to come to Michigan and make the vast expenditures necessary to build an approvable site? I don't see small companies having the financial capability and long-term strength to build the sites, manage them adequately, ensure an adequate closure, and a possible 15 years of additional liability. This will have to be done by large corporations."

Barnes does not feel that this bill will cause an overwhelming amount of additional paperwork or an excessive cost. "Everyone agrees that the waste has to be tracked, that the manifest system is needed. Industry is used to bills of lading and that sort of thing. It shouldn't be a big problem. I don't see the paper crunch as being that bad either. I don't personally think it's prohibitive in any way," said Barnes.

At this point, the word on Act 64 is optimism. Stein feels that "the problem with RCRA is that it doesn't make a provision for siting — and that's what this Act does." Schmidt says, "When it's all over and done, we'll find this a very workable law. We're way ahead of everyone."

Art Badert is a public information specialist with EPA's Region V Solid Waste Management Branch.

Part of the information for this article was provided by the Michigan Coalition for Better Waste Management.

PCBs Revisited

"PCB in Eggs Dooms 300,000 Chickens"
"PCB Warning on Mississippi"
"Stricter PCBs Rule Delayed"
"Equipment Is Dismantled at Plant with PCB Leak"

Recent weeks have seen an increase of news stories across the country about PCBs. This month *Environment Midwest* takes another look at this group of toxic chemicals: what EPA is doing about them and what remains to be done. We also bring you up to date on the work of Dr. James Allen, a leading researcher on the health effects of PCBs on primates, and of Dr. Douglas Hallett, whose work is with herring gulls on the Great Lakes.

By Susan Nelson

As *Environment Midwest* went to press, blood tests and breast-milk samples were being considered in the West for residents of nine States who had possibly been exposed to PCBs in their food. Health officials had found PCB contamination in food or animal feed in Idaho, Utah, Montana, Washington, Oregon, Iowa, North and South Dakota, and Minnesota. And the list of States seems sure to grow.

PCBs—polychlorinated biphenyls—have been called one of the most persistent toxic pollutants in the environment. Members of a broad family of organic chemicals known as chlorinated hydrocarbons, PCBs were discovered in the late 1800s but were not used industrially in the United States until 1929.

Between 1929 and 1971, however, PCBs came into wide usage in industry. Their chemical and thermal stability, fire resistance, and good conductivity were properties that suited them for electrical transformers and capacitors. Other properties of PCBs were well-matched to the manufacture of such various products as plasticizers, adhesives, paints, carbonless carbon paper, inks, and lubricants.

In 1966 Swedish scientists began to speak and write of the toxicity of PCBs. In 1968 some 1,200 people in Japan were accidentally poisoned after they used cooking oil that had been contaminated with PCBs. Health symptoms—skin lesions, constant abdominal pain, numbness and pain at the limbs, menstrual disturbances, babies born with abnormally dark skin, forms of cancer, changes in the blood—have been and continue to be documented by scientists who have followed up on what is now called the "Yusho" incident.

Manufacturers of PCBs and those who transported and used the chemicals began to reduce and restrict PCBs in the early 1970s. In 1976 EPA banned the manufacture of PCBs. On July 2, 1979, EPA announced the total ban on use and transport of PCBs, except by EPA-approved permit.

EPA's Region V Toxic Substances Office sent registered letters to the Region's 2,837 known users of PCBs before the ban. (The largest users are transformer repair or service companies; heavy industries, including steel producers, that use transformers, capacitors, and hydraulic systems; and utility companies.) The Toxic Substances staff has responded to more than 2,000 PCB-related telephone inquiries. And, as part of a nationwide program EPA began in January of this year, the staff has been making compliance inspections of known PCB users. Results of these inspections are being evaluated for potential EPA enforcement actions.

Why all the attention paid to something the eye can't even see?

PCBs are harmful. Once they are released into the environment—as they were before regulations and the ban, as they continue to be when improperly disposed of—they do not break apart into new, less harmful chemical arrangements. Instead they remain bonded together (chlorine molecules and biphenyl molecules) and bioaccumulate in organisms throughout the environment.

In other words, PCBs that have been discharged into waterways, for instance, will remain there, or in the bottom sediments, where organisms that inhabit those waterways feed on PCB-contaminated matter. These organisms—from microscopic plankton to small fish to large fish and gulls to man—retain PCBs in varying levels in their bodies, particularly in the fatty tissues and the organs. As PCBs move up the food chain, from lesser organisms toward man, their concentration increases.

The same pattern is followed if PCBs are accidentally mixed with poultry feed, for instance, or if PCBs are mixed with oil used in cattle back-scratchers in feedlots, as happened this last summer in Kansas.

Since the ban on PCBs was announced, the U.S. Food and Drug Administration, which sets allowable standards on PCBs in foods that humans eat, announced it was lowering PCB levels for the four food categories in which PCBs are known to be found. As reported in *Environment Midwest* in August, these levels were as follows, with

MAJOR PCB DISCHARGERS AND PROBLEM AREAS IN REGION V, BY STATE

(Noncontaminated Great Lakes rivers and harbors typically register PCB levels of 1 part per million (ppm).)

STATE	LOCATION OF PROBLEM	MAXIMUM PCB CONCENTRATION	YEAR DISCOVERED
ILLINOIS	Waukegan Harbor	10,000 ppm in sediments	1976
	North Ditch tributary to Lake Michigan	245,000 ppm in sediments	1976
INDIANA	Bedford	30,000 ppm in sediments and sludge; 300 ppbillion in outfall water	1976
	Bloomington	Above 50 ppm in sludge	1976
	Indiana Harbor	26 ppm* in sediments	1977
MICHIGAN	Saginaw River	23 ppm* in sediments	1976
MINNESOTA	no known significant discharge areas		
OHIO	Ashtabula River	63 ppm in sediments	1979
	Fields Brook tributary to Ashtabula River	72 ppm in sediments	1979
WISCONSIN	Fox River	61 ppm* in sediments	1977
	Sheboygan River	190 ppm in sediments	1978
	Soil adjacent to Sheboygan River	120,000 ppm	1978

**Based on currently available data. Further investigations may yield significantly higher concentrations of PCBs.*

lowered levels to become effective on August 28, 1979:

- Eggs...from .5 to .3 parts per million (ppm)
- Milk and Dairy Products...from 2.5 to 1.5 ppm
- Poultry...from 5 to 3 ppm
- Fish and Shellfish...from 5 to 2 ppm

Lower levels for the first three groups went into effect, as planned, on August 28. But the National Fisheries Institute, a trade association, filed objections to lowering the standards for fish and shellfish and requested a hearing.

Therefore, allowable standards for PCBs in edible portions of fish and shellfish remain at 5 ppm. The hearing has yet to be announced. (If you want to make your opinion known, either supporting or opposing the new, lower level, send your comments to Hearing Clerk, FDA, Room 4-65, 5600 Fishers Lane, Rockville, MD 20857.)

The increased attention being paid to PCBs no doubt comes from a better-informed public—as well as the much tighter regulations that pertain to PCBs. (For a copy of *EPA's Final PCB Ban Rule: Over 100 Questions & Answers To Help You Meet These Requirements*, write to EPA's Office of Toxic Substances, TS-799, Washington, DC 20460.)

Unfortunately, there is much more to controlling PCBs than banning their manufacture, use, and transport, especially in the Midwest.

Region V is number one in the Nation for heavy industries that require the use of PCBs, says Dr. Sheldon Simon, director of Region V's PCB program in the Toxic Substances Office. "People are becoming aware of the ban and the new regulations now," he says. "And industries should have had in-house programs since 1978" for the proper marking, use, storage, and disposal of PCBs.

Indeed, it is the disposal of PCBs that poses the greatest threat to the environment: The growing awareness of PCBs has not yet brought about a similar growth in finding and gaining acceptance for properly managed and approved disposal sites for products containing PCBs.

Only seven such sites currently exist in this country for land disposal of PCBs: in Niagara Falls and Model City, New York; Livingston, Alabama; Santa Barbara County, California; Beatty, Nevada; Arlington, Oregon; and Grand View, Idaho. An application has just been approved that establishes Region V's first PCB land disposal site in Clermont County, Ohio, near Williamsburg.

Properly managed landfills and high-temperature incineration are the only two known means for disposing of PCBs. Only one such incineration facility currently exists, a General Electric Company incinerator in Waterford, New York, that is permitted to accept only on-site PCB wastes.

This situation is also likely to change soon. Region V has received a half-dozen applications for high-temperature incinerators that propose to dispose of PCBs. Among the applicants, according to Charles Grigalauski of Region V's Hazardous Wastes Branch, are firms in Chicago, Chicago Heights, Detroit, and Middletown, Ohio. Applications are pending. When the applications are deemed complete, a public notice will be issued soliciting public comments.

When PCBs are burned at temperatures too low to destroy the molecules, they escape into the air, where they are carried by wind currents to locations hundreds or thousands of miles from their source. It is this type of burning that is said to be introducing PCBs to Lake Superior. Though levels there fall below FDA's standards, scientists say there is no other source for Lake Superior PCB contamination than airborne pollution. EPA is conducting and funding research into the PCB problem in Lake Superior, as well as PCB research throughout the country.

It is to combat improper disposal techniques—and to end the stockpiling of PCB wastes that is inevitable until and unless proper disposal facilities are found and approved—that EPA is applying much of its efforts.

Susan Nelson is a writer/editor with EPA Region V.

Monkeys React Drastically to PCBs

Dr. James Allen, an experimental pathologist at the University of Wisconsin Medical School, is a leading researcher in the field of health effects of PCB contamination.

He began PCB studies—"primarily their ability to stimulate the enzymes that control liver function"—in 1967. When the Yusho incident occurred in Japan in 1968, he says, "we expanded our work to include more clinical studies.

"In a relatively short time we found that rats were relatively poor subjects. We switched to rhesus monkeys in 1968-69 and found that they more closely approximate symptoms observed in man."

Dr. Allen presented results of PCB studies — of rhesus monkeys at the Wisconsin Regional Primate Research Center—at EPA's National Conference on PCBs, held in Chicago in November, 1975. His results startled the scientific world.

Female monkeys that had been fed 25 ppm PCBs in their diets "developed facial lesions similar to those observed in the animals receiving higher levels of PCBs," his 1975 presentation stated. "After two months on the PCB diet it was necessary to discontinue the exposure due to the severity of the intoxication. One of the six experimental animals died four months after the initial exposure to PCBs. The surviving adult female monkeys continued to be devoid of eyelashes and displayed facial acneform lesions two years following exposure to the PCBs. Infants born to these females were small and contained PCBs in their tissues at birth."

Female monkeys that had been given 2.5 and 5 ppm PCBs in their diets developed facial swelling, swollen eyelids, loss of hair, inflammation of the skin, and acne within two months. "By the fourth month, irregularities in the menstrual cycle were recorded." Six of the eight females that were bred after six months of PCB exposure conceived; the other two did not. (All of the control-group females conceived.) Of those that did conceive, "four experienced early abortions." All eight of the 2.5 ppm females conceived, but only five carried their infants to term. (All of the control females carried their infants to term.) All PCB-exposed infants were small, "and at birth their skin contained detectable levels of PCBs.

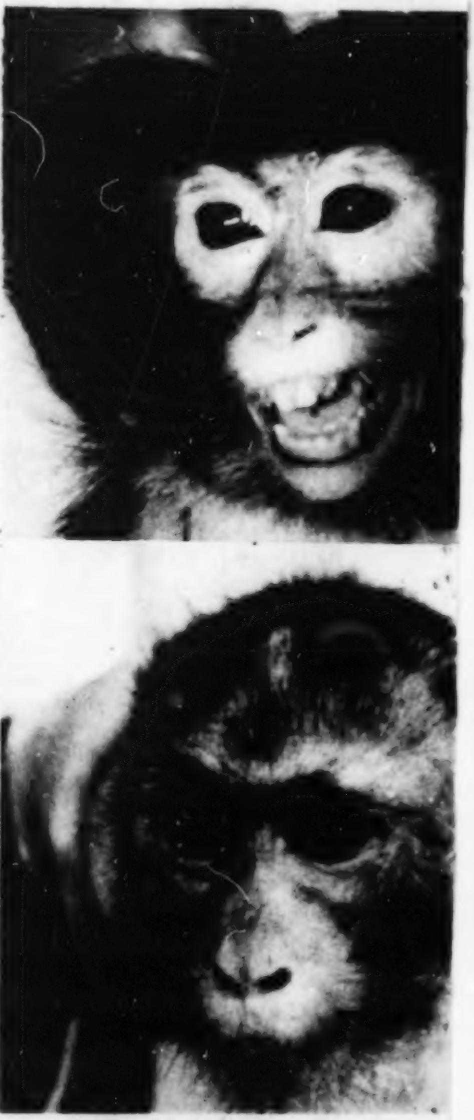
"The infants were permitted to nurse for four months," Dr. Allen reported four years ago. Within two months the infants showed swollen lips and eyelids, loss of eyelashes, lesions, and increased pigmentation of the skin. "Within four months, three of the six infants that had survived died due to PCB intoxication."

Dr. Allen's studies of the effects of PCBs on rhesus monkeys has continued, with the last group of infants born early in 1979. His evaluations of the studies also continue, and he says that results suggest both the toxicity and the tenacity of PCBs upon the more than 100 monkeys that have been involved to date.

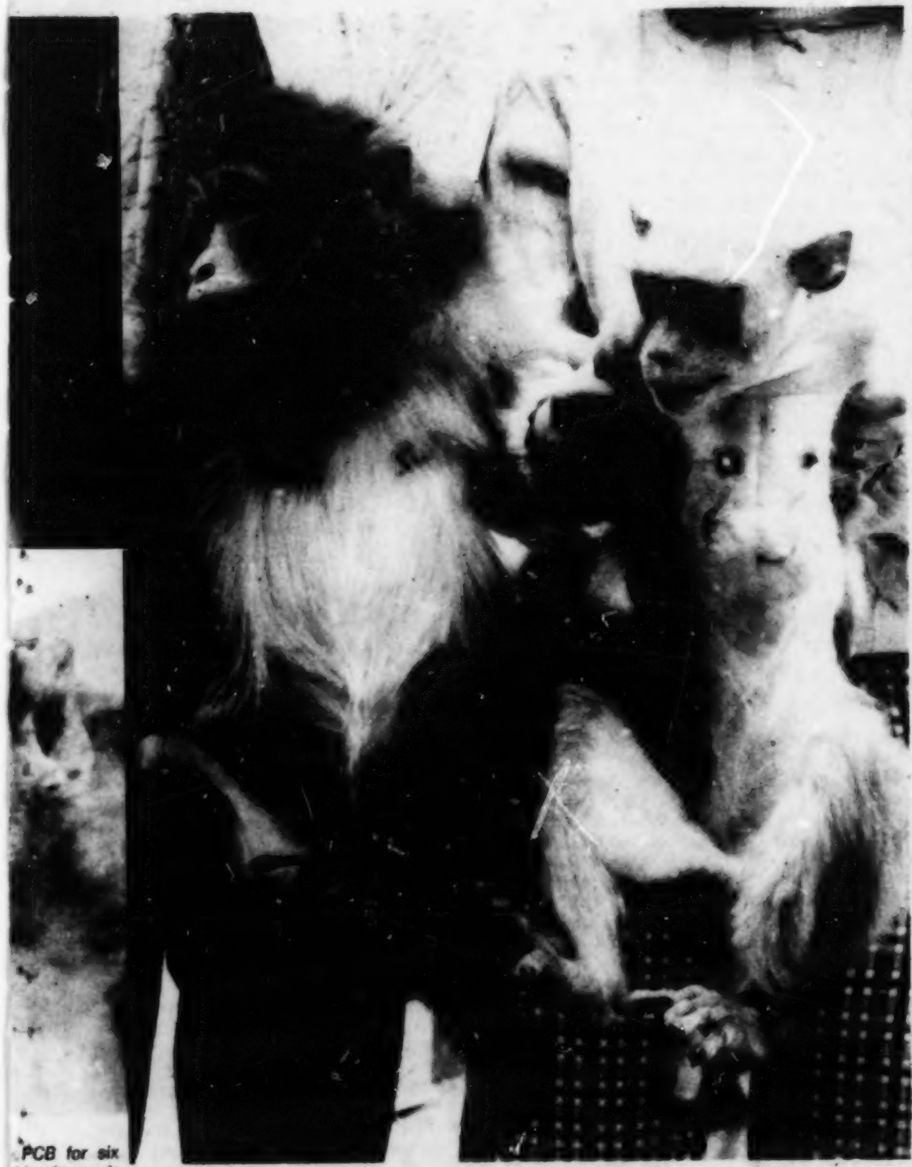
"Another group of females fed 1 ppm and .5 ppm PCBs for more than two years were bred after six months," Dr. Allen said recently. "The mothers showed no abnormalities over a period of two years" at those levels. "However, their infants have shown the same changes observed in the previously described experiments." Of 16 females—eight fed the two levels of PCBs and eight controls, which received no PCBs — "eleven animals were born. Seven survived. There were [spontaneous] abortions."

Beyond this, the PCBs apparently bring about "learning disabilities, small infants, altered immune responses—infants that are more susceptible to common bacterial infections—and learning and behavioral deficiencies.

"I think we can look at these data," Dr. Allen told *Environment Midwest*,



This female monkey is shown before receiving 2.5 p months and after receiving the PCB diet. The most noti loss of hair and acne.



.PCB for six
ible change is

How do PCBs affect rhesus monkeys? The adult females here are evidence. The monkey on the left is a control; the one on the right received 5 ppm PCB in her diet for six months before this picture was taken. Note loss of weight and hair.

"and say that PCBs are extremely toxic. The fetus and the neonate—newborn—are the most susceptible to PCB exposure. The adult may show no signs of intoxication, yet there will be an effect on the infants or the fetuses."

It is his opinion that rhesus monkey data being collected suggest that "we should look closely at the human population...for fetal and neonatal effects that may be occurring. These may be very subtle, but they should be clarified."

(Admittedly, such tests will not be easy. "How are you going to tell if a child has a little lower IQ, or is a little more susceptible to a bad cold, or is a little smaller?")

As for any such PCB-related studies under way, Dr. Allen said that the National Institute of Environmental Health "has a rather large study in North Carolina, and a number of States have smaller studies."

Apparently there is time for such studies. "I am not aware of any incidents of human intoxication by PCBs" beyond the Yusho incident and isolated industrial cases, he said. "There are no documented cases of PCB intoxication in the human population." After a pause, he added: "Maybe we haven't looked closely enough...but the reason we should do epidemiological studies (those that deal with incidence, distribution, and control of disease) is to see if we *do* have a problem.

"If there are injurious effects, one hopes we'll be able to modify these through our own efforts, or through repair mechanisms in our own bodies so that these effects will be less toxic."

Yet, Dr. Allen says, "Even though we have no proof that human babies are affected, I would go along with regulations in many States in the Great Lakes area that pregnant mothers not consume [potentially PCB-contaminated] fish during pregnancy or while nursing."

—S.N.

EPA Documerica Photo

Herring Gulls: a New Indicator?

The race to track down PCBs in the environment follows several paths. Sampling fish and other sources of food for mankind is one such path; the reason is obvious. Another, newer method of monitoring for PCBs is the use of a species of gull that, like fish, feeds on smaller fish.

Like fish, these gulls move about in order to find food. Unlike fish, however, the gulls tend to move farther, and they are easily observed in their habitat. And, according to the Canadian scientist who is carrying out extensive research with them on the Great Lakes, these gulls are a much more sensitive barometer to accumulations of PCBs and other contaminants than the fish that are tested by each State and the governments of both the U.S. and Canada.

Findings are so new that they have not been widely published in scientific journals, which provide peer review of new scientific evidence. But information about research on the herring gull was presented in July at the annual Great Lakes Water Quality meeting of the International Joint Commission (IJC) in Detroit. Explaining his work was Douglas Hallett, a research scientist with the Canadian Wildlife Service in Ottawa.

Dr. Hallett has been involved in studies of herring gulls since 1975, when Canada's research that had begun around 1970 became a major Canadian research effort. The gulls — a nonmigratory species found within the entire Northern Hemisphere and particularly throughout the Great Lakes region—were chosen for several reasons. First, they are found throughout the Great Lakes region. Researchers in Sweden and in Japan were conducting studies at that same time on herring gulls in the Baltic Sea and the Sea of Japan, respectively, Dr. Hallett says, and were finding elevated levels of toxic contaminants in the birds. More urgent in 1970, though, was the fact that herring gulls on Lake Ontario were known to be in trouble, and toxic contaminants were the suspected reasons.

"Reproduction success of the birds was virtually zero," Dr. Hallett says. Herring gull populations are relatively stable, he explains. They live in colonies that are well established; adults tend to mate for life when they are four years of age, he adds.

Besides, Dr. Hallett says, "Herring gulls are the only species with which we can visibly monitor the biological effects of contaminants on an annual basis as well as look at trends in residue levels themselves, to see if they're going up or down." The gulls are especially valuable because "they integrate the whole Great Lakes system by eating so many fish," he says.

His research is based on 10 colonies of herring gulls, each well established and consisting of approximately 100 families. The Canadians have chosen two colonies at either end of Lakes Superior, Huron, Erie, and Ontario. Since 1975 the U.S. Fish & Wildlife Service has monitored two colonies of birds on Lake Michigan, which lies entirely within U.S. boundaries.

Three visits are made to each colony each year. On the first visit, scientists first count and then "randomly select 10 eggs from 10 different families." (Each female lays three eggs.) These eggs are taken back to the same laboratory and analyzed for levels of bioaccumulation of toxics. "Levels in the eggs roughly reflect levels in the livers of adult birds," Dr. Hallett says. (During intensive studies—conducted in 1975-77 on Lake Ontario and in 1978-79 on Lake Erie—researchers have taken "about 10 adults off the whole lake. We have tried to capture breeding pairs so that we can tell levels of bioaccumulation in the mother, father, and the eggs.")

On the second visit researchers count the number of chicks that have hatched, which is a further assessment of the fertility level of the eggs. The third time out, Dr. Hallett says, researchers "count how many actually flew away."

Results of this research are encouraging, Dr. Hallett says. The levels of PCBs between 1974 and 1978 have decreased on all of the Great Lakes, according to analyses of the herring gull eggs. Lake Ontario gulls are "back to normal, and all the lakes are showing normal reproduction" rates, he says. "Herring gulls are on the increase now."

Studying gulls is but one of several ways to monitor the environment for PCBs and other contaminants that accumulate in living organisms for long periods of time. "I think we certainly need to continue to monitor fish, to bear out things we're finding in herring gulls," Dr. Hallett says.

EPA and other agencies that are committed to protecting the environment continue to monitor, and to be receptive to, new methods for assessing toxic contaminants in the water that mankind depends on.

— S.N.

EPA

News Around The Region

ILLINOIS • Gov. Thompson vetoed a hazardous waste disposal bill, objecting to a provision that would allow EPA to grant a landfill permit only after the operator has shown that there was no other means of disposing of the wastes. Thompson indicated he would sign a less stringent bill.

• Starting January 1, 1980, it will be illegal for hospitals to dump their hazardous wastes in landfills. Such infectious wastes would have to be incinerated or disposed of in some alternate manner.

• A spill at Elgin dumped between 5 and 600 gallons of cyanide into a storm sewer, raising concern for fish in the Fox River and Poplar Creek. No danger to public health, State EPA said.

• New legislation approved by the Governor would give the State the "best detection and instant-warning system on nuclear power station accidents in the Nation." The State will operate 24-hour radiological monitors at seven nuclear power plants, with the $4.2 million three-year cost to be borne by the plants themselves.

• The Illinois Appellate Court, 4th District, upheld an order by a Macoupin County Circuit Court, saying the Wilsonville hazardous landfill poses a threat, and agreeing that the landfill should be closed and the site reclaimed. The decision may be appealed to the Illinois Supreme Court. Residents of Wilsonville have been fighting the landfill since 1977. The site, which was issued an operating permit by Illinois EPA, contains PCBs and other special waste.

INDIANA • Fort Wayne received a green light from EPA on its preliminary plans to widen Hobson and St. Joe Roads from Coliseum Boulevard to Mayhew Road. Shoaff Park will remain intact. The Environmental Impact Statement has been approved for the $800,000 project, scheduled to begin in 1981.

• The Indiana Stream Pollution Control Board in Indianapolis partially lifted the ban on new sewer construction in Gary to allow the processing of an additional million gallons of sewage per day.

• Norfolk and Western Railway Co. in Fort Wayne has agreed to pay $10,000 in civil penalties and to construct a system for the reduction of grease and oil pollution in a ditch it operates.

MICHIGAN • A two-month full scale test will be conducted in the near future by the Detroit wastewater treatment plant to determine if existing facilities are adequate to provide secondary treatment. A major problem is inadequate solids processing capacity of the vacuum filters. The test will be performed under a Federal court order.

• Twenty-three Negaunee Township home owners, who claimed that red ore dust from a nearby plant has reduced the value of their property, were offered a $300,000 settlement in a Marquette County Circuit Court. Home owners said they have been plagued by the dust for years, and, what's more, company officials failed to do anything about it.

• EPA Administrator Douglas Costle announced in Lansing that he intends to deny Michigan's request for an extension of the deadline for obtaining legal authority to institute an automobile inspection and maintenance (I&M) program. This means that new-source permits for hydrocarbon and carbon monoxide emitters in the Detroit area will continue to be frozen until the Michigan legislature passes a bill authorizing and I&M program in at least the southeastern part of the State. This mandatory freeze is provided for by the Clean Air Act. Cut-offs of Federal highway funds for the Detroit area are also a possibility. An I&M bill, supported by Governor Milliken, is expected to be introduced later this month.

MINNESOTA • The State Department of Health (DOH) issued a revised advisory on the eating of fish from certain waters because of "increased concerns regarding the intake of PCBs." Guidelines applied to fish from the Mississippi River between St. Anthony Falls Dam in Minneapolis and Alma, Wisc., and from the Minnesota River between New Ulm and Fort Snelling. A new advisory will be issued before the next year's fishing season, DOH said.

• About 210,000 gallons of crude oil were spilled when a pipeline ruptured some 22 miles northwest of Bemidji. Cleanup was complicated because some of the oil had reached the water table 15 feet below ground. The cleanup "will take months," the Minnesota Pollution Control Agency said, and will cost the pipeline company at least $150,000, according to the company's estimates.

OHIO • The University of Akron, under the auspices of EPA, is assembling a wealth of data in a $600,000 study that will show the effects of air pollution on children. Major part of the research began three years ago at two Akron schools and later included the testing of adults too. When completed, this will be the most concentrated study of its type in the United States, according to Dr. Richard Mostardi at the university.

WISCONSIN • Three possible sites for a proposed new 400 megawatt coal-fired power plant were announced by the Wisconsin Public Service Corp. They are in Eau Pleine, Portage County; along the Fox River in Lawrence, Brown County; or five miles west of Oconto, along the Oconto River. Landowners in these proposed areas have been notified.

• Grass cuttings, leaves, branches, sawdust, and other wastes may not seem like pollutants, but they are—the State Department of Natural Resources (DNR) declared—and reminded home owners that dumping of these wastes in water is against State law, with possible fines of $200 per offense, 90 days' imprisonment or both. DNR is concerned that these materials could harm fish and game.

• The Wausau landfill may continue to operate until December 20, when a Marathon County landfill is scheduled to open, DNR said.

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NEW PRETREATMENT STANDARDS FOR ELECTROPLATERS

EPA's new standards for electroplaters will reduce the amounts of lead, cadmium, cyanide, chromium, copper, nickel, and zinc discharged into municipal sewerage systems. These pollutants are toxic to humans, animals, and plants; some are suspected cancer-causing agents. They can also interfere with sewage treatment plant operations and contaminate sewage sludge with metals. A large portion of these pollutants finds its way into the Nation's waterways.

The new standards are expected to reduce the amount of these toxic pollutants entering the sewage plants by about 140 million pounds per year. EPA will be working with the Small Business Administration (SBA) to offer financial assistance to eligible small electroplating firms affected by these new regulations. It is developing a loan assistance program to ensure that electroplaters eligible for SBA loans do not face unnecessary obstacles and are aware of the financial help available. Under the new standards, many electroplaters may have to install pretreatment equipment.

The Department of Defense has also agreed to limit cadmium plating requirements on military hardware.

NOISE-LABEL PROGRAM ESTABLISHED

EPA has established a noise-label program that will require manufacturers to put labels on two types of new products: those that produce noise above healthy levels and those that are sold to reduce noise.

Labels on noise-producing products will show a Noise Rating: the *lower* the rating, the quieter the product. Labels on noise-reducing products will have a Noise Reduction Rating: the *higher* the rating, the more effective the product in reducing noise. The consumer will also be able to read on the label the noise characteristics of a specific brand by comparing the product's Noise Rating or Noise Reduction Rating with those of other brands.

For example: a product with a Noise Rating of 80 decibels is noisier than one with a rating of 50 decibels. Conversely, a product with a Noise Reduction Rating of 30 decibels is more effective than one with 10 decibels.

Under the new regulations, authorized by the Noise Control Act of 1972, manufacturers will be responsible for testing their products according to EPA procedures. EPA will be enforcing the new noise-label program.

Anyone interested in copies of the new regulations or in background technical information, may write to: U.S. EPA, Public Information Center (PM-215), 401 M Street SW, Washington, DC 20460. Tel. (202) 755-0344.

RESOURCE RECOVERY GRANT TO TOLEDO

EPA has awarded a $116,633 grant to the Toledo Metropolitan Area Council of Governments for planning a resource recovery facility for the Toledo area. The facility will process about 275,000 tons of municipal refuse per year. Refuse will be either burned in a steam generating incinerator or processed for incineration as fuel for a commercially owned plant.

Such facilities reduce the need for unpopular landfills, recover recyclable materials, and reduce dependence on scarce fossil fuels, EPA said. The grant represents 75 percent of the total project cost. Part of President Carter's Urban Policy Program, this is one of 68 such projects nationwide, expected to be funded under the Resources Conservation and Recovery Act.

CHANGES IN AIR POLUTION REGS FOR NEW POLUTION SOURCES

Based on a Federal court decision, EPA is proposing air pollution regulations that will significantly affect new plants prior to construction and existing plants prior to modification, to make sure that their emissions won't adversely affect clean air or make dirty air even worse.

A major impact of the proposed changes is that fewer new sources will be subject to the new regulations. On the other hand, there will be an increase in number of air pollutants that must be monitored and for which the best available control technology must be applied. The proposals also make it harder for existing sources in dirty-air areas to avoid regulatory review when changes are made to their plants.

The proposed rules have been published in the *Federal Register* of September 5, 1979. For for information, contact Michael Trutna, Standards Implementation Branch (MD-15), Office of Air Quality Standards, Research Triangle Park, NC 27711. Tel. (919) 541-5291.

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REVERSAL ON OHIO COAL SWITCH CONSIDERED

Significant economic disruption and unemployment would not occur if Ohio utilities switched to low-sulfur coal, EPA said in a proposed determination last month. Action under Section 125 of the Clean Air Act will therefore be unnecessary, it said.

Under Section 125, utilities may be required to burn local high-sulfur coal if switching to imported low-sulfur coal would cause great economic hardship in an area.

The proposed determination is a reversal of EPA's announcement made last December, which indicated that, because of possible economic hardship, Section 125 may be invoked. EPA proposed its new determination in view of "refined analysis" and other data that have come to light since then.

A public hearing on the proposal has been rescheduled for St. Clairsville, Ohio, on November 20. EPA will receive written comments on the proposed determination until December 5, 1979. For more information, contact Francis J. Biros, Technical Support Branch, Office of Enforcement, EN-341, U.S. EPA, 401 M Street SW, Washington, DC 20460. Tel. (202) 755-2560.

FARMERS WARNED OF WASTE OIL DANGERS

Applying pesticides mixed with waste oil to protect cattle from lice and other parasites may result in the animals' deaths, EPA warned farmers. The waste oil from electrical transformers may contain high concentrations of polychlorinated biphenyls (PCBs), a chemical that presents a health hazard to both humans and animals.

EPA's concern was raised by a Kansas Department of Health and a U.S. Food and Drug Administration report. It said that 54 of 168 head of cattle vaccinated and dipped on a Kansas farm had died. The fat in carcasses contained high concentrations of PCBs, which came from waste transformer oil the farmer used for animal back rubbers. The PCBs were absorbed through the pores.

EPA banned the production of PCBs in 1976.

RAT AND MOUSE KILLER OFF THE MARKET

The Rohm and Haas Co. of Philadelphia has voluntarily requested that EPA cancel registrations for its rat and mouse killer products sold in the U.S. The company has stopped the sale of these products worldwide and has issued a recall to all distributors.

The rodenticides contain Vacor, a chemical that has been implicated in two accidental human deaths and several suicides in the U.S. At the time of the company's request, EPA was reviewing all Vacor products for toxicity. Announcing that it will cancel the four company product registrations in this country, EPA commended Rohm and Haas for its voluntary action.

Anyone having Vacor products should use them only as directed and keep them out of reach of children and pets, EPA cautions.

AIR FORCE BASED SUED

Michigan Attorney General Frank Kelley filed a suit against Wurtsmith Air Force Base for alleged contamination of surface waters with trichloroethylene (TCE), a degreasing agent used to clean jet engines. The suit was filed in U.S. District Court in Bay City on August 29. It also charges the Air Force with delays and failure to correct the problem as promised.

The suit contends that the problem goes back to at least the middle 1960s, when Air Force supposedly began adding chemicals to drinking water, to conceal the odor of TCE. Kelley said EPA studies showed that TCE can cause central nervous system disorders and blurred vision, among other ills.

EPA's Eastern District Office in Westlake, Ohio, has been involved in investigations at the base and the surrounding area.

COMPUTERIZED INFO SYSTEM ON TOXICANTS

The University of Minnesota, using funds from EPA Region V and the Office of Research and Development, is working on a new computerized data system for toxic chemicals. The data bank is known as Information System for Hazardous Organics in Water, or ISHOW. It now contains physical, chemical, and toxicological information on a large number of chemicals and represents the first phase of a project whose aim is to take a broad look at chemical structure and from it predict biological activity.

EPA Project Officer Gil Veith said information from the system will be easily retrievable by laymen, who will have no problem understanding common names and terms used throughout. It will be just a simple matter of calling a computer, he said.

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NPDES SEMINAR HELD

Region V EPA held a seminar on October 2 for industry, consultants, and the States to acquaint them with biomonitoring requirements and methods that are being implemented in the National Pollutant Discharge Elimination System (NPDES) permit program. The seminar presented in detail the types of biomonitoring evaluations that industries will be required to conduct under the second round of NPDES program short-term permits.

Besides general announcements, EPA has sent special letters to about 150 industries that have been identified by the States or EPA as most likely to have the greatest need for biomonitoring evaluations.

CONDITIONAL OK ON BENOMYL

The fungicide benomyl may continue to be used—provided that bags containing five or more pounds of the chemical for aerial application be water soluble, or that sprayers wear a cloth face mask during mixing. Manufacturers must add labels warning of benomyl's potential adverse effects to protect the professional handlers, who have the greatest exposure to the chemical.

Sold under the name Benlate, benomyl is manufactured solely by the E.I. duPont de Nemours & Co. It is used by growers to control plant rot and molds on rice, oranges, apples, beans, and other fruits and vegetables. Benomyl is also used on home lawns and gardens, but in such small amounts that the individual home owner doesn't have to take protective steps.

EPA needs more data before it will consider giving benomyl full approval.

16 INDIANA FACILITIES COMPLY, 8 DON'T, WITH DRINKING WATER STANDARDS

As reported in the previous issue of *Environment Midwest*, a number of Indiana facilities failing to test their drinking water according to Federal Standards were cited for noncompliance.

The following Indiana facilities have since then initiated the required monthly testing. Samples from these facilities now show that their drinking water is safe:

Shady Grove Mobile Home Park,	LaPorte
Farmersville Mobile Home Park,	Mt. Vernon
Golden Rule Nursing Home,	Danville
Roundhouse Mobile Home Park,	Indianapolis
Morrison's Mobile Home Park,	Danville
North Pine Estates Mobile Home Park,	Terre Haute
Pine Forest Mobile Home Park,	Terre Haute
Midway Mobile Home Park	LaPorte
Ciscell Mobile Home Park,	Jonesboro
Lincoln Manor Mobile Home Park,	Marion
Golden Pebble Mobile Home Park,	New Castle
Smitty's Mobile Home Park,	New Castle
Peartree Mobile Home Park,	Alexandria
Mills Lake Mobile Home Park,	Farmland
Stony Creek Mobile Home Park,	Zanesville
Twin Bridges Mobile Home Park,	Peru.

However, eight other Indiana facilities have not had their water analyzed for contamination for at least the past six months. Therefore, EPA cannot assume that water supplied by these facilities is safe for human consumption:

*Pioneer Valley Mobile Home Park, La Porte.....*Lancaster Mobile Home Park, Monticello.....*Pleasant Valley Mobile Home Park, Logansport.....Beaver Lodge Mobile Home Park, Kokomo.....Queen Road Mobile Home Park, Plymouth.....*Colonial Mobile Home Park, Michigan City.....*White Horse Mobile Home Park, Decatur.....*Lor Mer Acres Mobile Home Park, Wabash.

Facilities marked with an asterisk* have been issued prior warning and face possible enforcement action if they continue to violate Federal drinking water regulations.

The monitoring of water samples, including bacterial analysis, is required by the National Interim Primary Drinking Water Regulations. The Safe Water Drinking Act also requires that water suppliers notify their customers whenever they fail to test their drinking water.

If coliform bacteria, which come from human and animal wastes, are found in drinking water, then there is a strong indication that disease-causing bacteria are present as well.

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PUBLIC COMMENTS ON ELECTRIC PLANT CONSTRUCTION

A joint public hearing, sponsored by U.S. EPA and Ohio EPA, was held in Columbus on September 18 to receive comment on the proposed construction of a refuse- and coal-burning electric plant for that city. EPA has given preliminary approval for the plant under the Clean Air Act provisions for Prevention of Significant Deterioration of air quality.

The Ohio State Implementation Plan is being revised to accommodate the new plant without lowering air quality. Several Columbus-area polluters will reduce their emissions of particulates and sulfur dioxide so that the new electric plant can be constructed without posing a danger to public health.

Written comments from the public were taken until September 21. EPA and Ohio EPA will evaluate all oral and written comments before making a final decision on the proposed plant's construction.

DAIRYLAND POWER CO. FINED $20,000

The Dairyland Power Co. in Wisconsin has pleaded guilty to one count of knowingly and one count of willfully violating the monitoring requirements of the National Pollutant Discharge Eliminations System permit for its Genoa nuclear power plant. The company was fined $10,000 per count, for a total criminal penalty of $20,000.

The violations were based on Dairyland's failure to acidify oil and grease samples and failure to take 24-hour composite samples for suspended solids on weekends. The guilty pleas were obtained by the U.S. Attorney for the Western District of Wisconsin, following a grand jury investigation.

ENVIRONMENTAL IMPACT STATEMENTS

Sponsoring Agency, Project Number, Type of EIS	Project Location	Description	Summary of Comments	Date, Rating
Housing & Urban Development Urban Renewal 79-013-1026 (Final)	Milwaukee, WI	Urban renewal project, including removal of Plankinton House.	Comments on draft adequately addressed.	8/8 Draft LO-2
Veterans Administration 79-017-2500 (Final)	Federal Region V	National Cemetery.	Comments on draft adequately addressed.	8/24 Draft LO-2
Corps of Engineers 77-018-181 (Final)	Kaskaskia Island, Il	Raising levee for flood control.	Environmental concerns over impacts on wetlands.	8/24 Draft ER-2
Housing & Urban Development Urban Renewal 78-080-1021 (Final)	Aurora, IL	Housing development, Fox Valley Villages.	Noise impacts and mitigating measures not addressed.	8/24 Draft EU-2

CODE:

LO—Lack of objections or minor changes suggested.
ER—Environmental reservations on certain aspects of project; suggest further study of modifications or alternatives.
EU—Proposed action environmentally unsatisfactory, potential safeguards are insufficient.
1–Adequately sets forth impact and alternatives to proposed action.
2–Insufficient information; EPA cannot fully assess project but can make preliminary determination of impact.
3–Draft inadequately assesses project and/or alternatives, EPA requests substantial revisions in draft.

All Region V EIS Comments are prepared by the Office of Federal Activities, Environmental Impact Review Staff. For more information or to obtain copies of EIS comments, contact Barb Taylor at (312) 353-2307, U.S. EPA, Region V, 230 S. Dearborn St., Chicago, IL 60604.

PEOPLE

Libby Halperin, formerly director of assessment at HEW, joined EPA's Region V Water Division as deputy director. She is no stranger to the Midwest; her previous service with HEW included a stint as assistant regional director for planning and evaluation in Chicago. Earlier in her career, she was a management analyst with the Office of Management and Budget in Washington and a management intern with the Atomic Energy Commission.

Thomas E. Yeates assumed a technical position once more as he became deputy director of the Surveillance and Analysis Division in EPA's Region V. He was formerly director of the Management Division and prior to that, head of the Central Regional Laboratory in Chicago. Yeates has been with EPA and its predecessor agencies since 1965.

Gus Speth has been designated chairman of the President's Council on Environmental Quality. He has been member of the Council since March, 1977.

David M. Rosenbaum has been appointed as deputy assistant administrator of EPA's Radiation Programs. As head of the Radiation Office, he will oversee the development of all EPA radiation standards.

Dale S. Bryson, in addition to his present duties as acting chief of EPA's Region V Water and Hazardous Materials Enforcement Branch, has been appointed deputy director of the Enforcement Division. He has been with EPA and predecessor Federal pollution control agencies for 19 years.

The Illinois Environmental Protection Agency (IEPA) announced four major appointments: **Delbert D. Haschemeyer,** acting deputy director and manager of the IEPA Enforcement Program, was named deputy director; **Barbara Sidler** became the new manager of IEPA's Enforcement Program; **John P. Anderson** was appointed manager of the Division of Laboratory Services; and **Ronald M. Barganz** was named manager of the Technical Operations Section, Mine Pollution Control.

Another promotion in EPA's Region V went to **Basil G. Constantelos,** who has been named deputy director of the Air and Hazardous Materials Division. He was formerly chief of the Water and Pesticides Enforcement Branch, Enforcement Division.

EPA photo/Leah Wilson

EPA photo/Birute

EPA photo/ Birute dujote

EPA photo/Leah Wilson

OFF THE PRESS

The following publications are available by calling or writing the Office of Public Affairs, U.S. Environmental Protection Agency, 230 S. Dearborn, Chicago, Illinois 60604, (312) 353-2072

FINDING YOUR WAY THROUGH EPA

A directory designed to help people find names, addresses, and telephone numbers of particular offices and individuals in the U.S. Environmental Protection Agency that can best answer their questions. Included are a subject index, an organizational chart of the Agency, a map of EPA's 10 regional offices, and brief descriptions of EPA's major programs.

OZONE: ITS EFFECTS AND CONTROL

A pamphlet prepared to help you better understand the evolving issues related to oxidant pollution and its control, and to help you participate in the decisions which must be made in your community to improve air quality.

AIR POLLUTION AND YOUR HEALTH

A booklet describing the principal kinds of air pollution, their sources and effects upon the human body. Brief background includes what is being done to curb air pollution, highlighting strategies of the 1977 Clean Air Act Amendments.

CONSTRUCTION GRANTS

ILLINOIS

Applicant	Award Amount	Date
Christopher	$10,575	8/28/79
Lake County DPM	23,250	8/24/79
Danville SD	40,500	8/24/79
Highland	38,550	8/16/79
Decatur SD	113,100	8/8/79
Troy	55,725	8/15/79
Palatine	750	8/13/79
Brookfield	38,175	8/6/79
Alexis	789	8/9/79
Winnetka	130,050	8/20/79
Worth	52,875	8/28/79
North Shore SD	278,475	8/8/79
Fairview	11,925	8/28/79
Forest River SD	5,750	8/15/79
Horvel	4,875	8/28/79
Forreston	10,350	8/15/79
Glenview	72,600	8/20/79
Monmouth	14,850	8/2/79
MSD of Chicago	25,800	8/31/79
Northbrook	93,375	8/15/79
Lebanon	95,850	8/30/79
Streamwood	36,900	8/6/79
MSD of Chicago	14,965	8/6/79
MSD of Chicago	915,300	8/28/79
MSD of Chicago	5,654,025	8/10/79
Mt. Vernon	95,700	8/21/79
South Palos Township	18,975	8/31/79

INDIANA

Applicant	Award Amount	Date
Evansville	$57,300	8/23/79
Batesville	11,400	8/24/79
Summit Springs RWD	5,100	8/23/79
Jackson City RSD	1,725	8/6/79
Jackson County RSD	1,725	8/6/79
Lynville	5,850	8/30/79
Crawfordsville	1,699	8/9/79
Beech Grove	1,746	8/31/79
Carmel	10,500	8/28/79

MICHIGAN

Applicant	Award Amount	Date
St. Clair County DPW	$59,850	8/28/79
Greenland Township	3,000	8/20/79
Saginaw County DPW	1,875	8/08/79
Munising	34,500	8/21/79
West Branch	7,500	8/24/79
St. Clair County	6,225	8/24/79
St. Clair County DPW	6,075	8/21/79
Ionia County BPW-Clarksville	2,700	8/23/79
Sunfield	1,276	8/30/79
Republic Township	2,100	8/24/79
Capac	5,625	8/21/79
Ottawa County	5,666	8/21/79
Sheridan	9,675	8/31/79
Muskegon County	66,776	8/06/79
Potterville	25-	8/06/79
Muskegon County Whitehall	638-	8/30/79
Detroit	1,567,275	8/21/79
Roscommon County DPW	47,464	8/02/79
Houghton County	240,150	8/21/79
White Cloud	184,450	8/27/79
Nashville	166,640	8/24/79
Kingsley	329,565	8/02/79
Baraga County	872,550	8/09/79
Fife Lake Utility Authority	165,445	8/28/79
Gladwin	15,075	8/28/79
Plainwell	291,525	8/13/79
Galesburg	7,500	8/15/79

MINNESOTA

Applicant	Award Amount	Date
Altura	$160,500	8/23/79
Brooten	11,278	8/27/79
Jordon	10,050	8/09/79
Chokio	24,150	8/28/79
Metro Waste Control Comm.	63,675	8/30/79
Foley	38,925	8/15/79
Cambridge	31,575	8/30/79
Barnesville	15,825	8/15/79
Brooks	16,200	8/15/79
Verndale	18,000	8/20/79
Hanska	19,350	8/15/79
Garfield	28,650	8/30/79
Glyndon	12,675	8/15/79
Alpha	28,125	8/15/79
Ottertail County	51,975	8/15/79
Wester Lake Superior	50,400	8/15/79
Winton	30,825	8/31/79
Bertha	39,075	8/31/79
Akeley	36,000	8/31/79
Dover-Eyota-St. Charles SD	3,750	

OHIO

Applicant	Award Amount	Date
Empire	$2,850	8/06/79
Lisbon	1,875	8/06/79
Canton	97,575	8/16/79
Killbuck	1,425	8/30/79
Barnesville	57,900	8/15/79
Ironton	128,925	8/15/79
Carey	45,000	8/15/79
Henry County	2,850	8/28/79
Cridersville	9,825	8/28/79
Canal Fulton	6,000	8/16/79
Napoleon	25,350	8/30/79
Grand Rapids	48,600	8/13/79
Summit County	183,600	8/28/79
Montgomery County	67,500	8/13/79
Leesburg	775,725	8/24/79
Lorian	48,000	8/21/79
Lafayette	119,325	8/02/79
Laurelville	468,675	8/30/79
Hamilton County	42,150	8/08/79
Wood County	899,925	8/30/79
Westerville	6,525	8/08/79
Medina County	312,975	8/08/79
Sandusky	74,775	8/02/79
Loveland	41,550	8/20/79
Columbiana	7,875-	8/13/79

WISCONSIN

Applicant	Award Amount	Date
Stoddard	$1,125	8/24/79
Alma Center	600	8/20/79
Hammond	26,850	8/30/79
Medford	16,225	8/20/79
Brownsville	10,725	8/28/79
New Auburn	22,800	8/15/79
Brooklyn	2,625	8/24/79
Milton	900	8/20/79
Berlin	20-	8/02/79
Cottage Grove	25,875	8/15/79
Sturtevant	7,800	8/15/79
Gresham	52,575	8/17/79
Pigeon Falls	18,675	8/28/79
Edgerton	110,400	8/15/79
DePere	130,200	8/02/79

FEDERAL REGISTER

AUGUST 8, 1979 - PROPOSED RULES: Air pollution control; new motor vehicles and engines: Voluntary aftermarket part self-certification program. Air quality implementation plans; approval and promulgation: Emission monitoring of stationary sources: advance notice. Air quality implementation plans; approval and promulgation; various States; etc.: New Jersey, Pennsylvania. **NOTICES:** Grants; State and local assistance: Appeal procedures; inquiry. Pesticide registration, cancellation, etc: Matacil 1-5 oil soluble concentrate. Pesticides; emergency exemption applications: Compounmd 1080. Pesticides; experimental use permit applications: Tebuthiuron, etc.; correction. **Federal Communications Commission: PROPOSED RULES:** Radio services, special: Maritime services; high seas public coast station operations, services and industry; inquiry. **AUGUST 9, 1979 - RULES:** Air quality implementation plans; approval and promulgation; various States, etc: South Dakota. Motor vehicle fuel economy: Removal of obsolete CFR sections. **PROPOSED RULES:** Air programs; approval and promulgation; State plans for designated facilities and pollutants: New Mexico. Air quality implementation plans; approval and promulgation: various States, etc: District of Columbia, Illinois, Ohio. **NOTICES:** Pesticides; tolerances in animal feeds and human food: Monsanto Co. **AUGUST 10, 1979 - RULES:** Air quality implementation plans; delayed compliance order: Ohio, Virginia (3 documents). Water pollution control: National pollutant discharge elimination system (NPDES): best management practice requirements; stay of effective date. **PROPOSED RULES:** Air pollution control; new motor vehicles and engine: Light duty trucks, emission regulations; 1983 and later model years; hearing. Air quality implementation plans; delayed compliance order: Ohio. Water pollution: effluent guidelines for certain point source categories: Chemicals manufacturing and plastics industries. **NOTICES:** Environmental statements; availability, etc: Agency statements, weekly receipts. Pesticides; experimental use permit applications: Chlorpyrifos, etc; correction. **AUGUST 13, 1979 - PROPOSED RULES:** Air quality implementation plans; approval and promulgation; various States, etc: Michigan. **NOTICES:** Grants, State and local assistance: Treatment works construction; qualification of major items of equipment; Program Requirements Memorandum, PRM 79-10. Water pollution: discharge of pollutants: Alabama. **AUGUST 14, 1979 - RULES:** Air programs; fuel and fuel additives: Refineries, small; exemption from average lead content of gasoline; correction. Air quality implementation plans; delayed compliance orders: Ohio. **PROPOSED RULES:** Air quality implementation plans; approval and promulgation; various States, etc: Georgia, Indiana, Wisconsin. **NOTICES:** Air quality implementation plans; approval and promulgation: Prevention of significant air quality deterioration (PSD); permit approvals (National Energy Corp.). Water pollution control: Coal mining: effluent guidelines and new source performance standards; technical reports, availability. **AUGUST 15, 1979 - RULES:** Air pollution control, new motor vehicles and engines: Nitrogen oxides (NOx); emission standards for AMC 1981 and 1982 model years. Air quality implementation plans; approval and promulgation; various States, etc: Ohio. **PROPOSED RULES:** Air pollution: standards of performance for new stationary sources: Glass maufacturing plants; extension of time. Air quality control regions; criteria and control techniques: California. Air quality implementation plans: approval and promulgation; various States, etc: Nebraska. Pesticide programs: Registration guidelines for supporting information; notification to Agriculture Secretary. **NOTICES:** Air pollution control, new motor vehicles and engines: Nitrogen oxide (NOx); emission standards Pesticides; temporary tolerances: (O-Ethyl)-4-methylthio phenyl S-propyl phosphorodithioate. Pesticide registration, cancellation, etc: Confidential formula statement; elimination. Pesticides, special packaging requirements; list of registrants; availability, etc. Pesticides; temporary tolerances: Fluridone. Pesticides; tolerances in animal feeds and human food: Shell Oil Co. et al. **AUGUST 17, 1979 -** RULES: Air pollution control, new motor vehicles and engines: Motorcycle engine families certification criteria; technical amendment. Air quality implementation plans; delayed compliance orders: Kansas, Ohio (2 documents). **PROPOSED RULES:** Air quality control regions; criteria and control techniques; Attainment status designations (Colo.) **NOTICES:** Environmental statements; availability, etc: Agency statements, weekly receipts. **AUGUST 20, 1979: RULES:** Air quality control regions, criteria and control techniques: Attainment status designations (N.C.) Air quality implementation plans; delayed compliance orders: Iowa (3 documents), Kansas (2 documents), Ohio. **PROPOSED RULES:** Air quality control regions, criteria and control techniques: Attainment status designations (W. Va.). **NOTICES:** Pesticide applicator certification and interim certification; State plans: Kentucky. Water supply/wastewater treatment coordination study; draft report to Congress, etc. **AUGUST 21, 1979** - See also Interagency Regulatory Liaison Group. **RULES:** Air pollution: standards of performance for new stationary sources: Priority list and additional categories. **PROPOSED RULES:** Air quality implementation plans; approval and promulgation; various States, etc. Tennessee; correction. **NOTICES:** Air programs; power plants; assessment and collection of noncompliance penalties; availability of information; correction. Meetings: State FIFRA Issues Research and Evaluation Group. **AUGUST 22, 1979: RULES:** Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc; Profenofos. **PROPOSED RULES:** Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc: Chlorpyrifos: Waste management, solid: Hazardous waste guidelines and standards; criteria Waste management, solid: Hazardous waste management; leaching test report; availability and inquiry. Hazardous waste management; requests for information; availability. Water pollution control: Consolidated permit regulations and underground injection control regulations; public participation in enforcement. **NOTICES:** Air pollution: standards of performance for new stationary sources: Kraft pulp mills; total reduced sulfur emissions; final guidelines availability; correction. Air pollution control, new motor vehicles and engines: Light duty vehicles; carbon monoxide emissions, 1981 and 1982 model years; hearing. Air quality implementation plans: Sulfur dioxide sources in Ohio; acceptable fuel sampling analysis methods. Grants, State and local assistance: Treatment works construction; class deviations Meetings: Science Advisory Board. Pesticide registration, cancellation, etc: Endrin; correction. Pesticides, emergency exemption applications: BAAM: Captafol, Permethrin (2 documents). Pesticides: temporary tolerances: Profenofos. **AUGUST 23, 1979 - NOTICES:** Meetings: Technology Assessament and Pollution Control Committee. Pesticides, experimental use permit applications; Permethrin. Toxic and hazardous substances control: Premanufacturing notices; monthly status report. Water pollution control; safe drinking water, public water systems designations: Minnesota, Missouri, Virgin Islands. **AUGUST 24, 1979 - PROPOSED RULES:** Air quality control regions, criteria; and control techniques: Attainment status designations (Georgia). Air quality implementation plans; approval and promulgation; various States, etc: Georgia. **NOTICES:** Environmental statements; availability, etc: Agency statements, weekly receipts. Pesticides; tolerances in animal feeds and human food: Ciba-Geigy Corp., E. I. du Pont de Nemours & Co., ICI Americas, Inc. **AUGUST 27, 1979 - PROPOSED RULES:** Air quality implementation plans; approval and promulgation, various States, etc: Maryland. **NOTICES:** Air quality control regions; criteria and control techniques: Attainment status designations. **AUGUST 28, 1979 - PROPOSED RULES:** Air quality implementation plans; approval and promulgation: Nonattainment areas; evaluation of plan revision submissions; supplement. **NOTICES:** Air quality criteria: Oxides of nitrogen; extension of time. **AUGUST 29, 1979: RULES:** Air quality implementation plans; approval and promulgation; various States, etc: Minnesota. Water pollution; effluent guidelines for certain point source categories: Best conventional pollutant control technology. Water pollution control: Hazardous substances; determination of reportable quantities. **PROPOSED RULES:** quality implementation plans; approval and promulgation; various States, etc: Illinois, Rhodes Island. Water pollution control: Hazardous substances designation; removal of calcium oxide and calcium hydroxide. National pollutant discharge elimination system; indicator parameters and application requirements; furthery inquiry. **NOTICES:** Air quality implementation plans; approval and promulgation: determinations. Prevention of significant air quality deterioration (PSD); permit approvals (4 documents) Pesticide registration, cancellation, etc: Dinitro Technical, etc. Rydex. Pesticides; emergency exemption applications: Acephate (2 documents) Botran 75W Permethrin. Pesticides; tolerances in animal feeds and human food: Phostoxin Sales, Inc. Water pollution control: Clean Water Act; assessment of civil penalties for discharges of oil, etc; agreement with Coast Guard. Water pollution control; safe drinking water; public water systems designations: Illinois, New York. Water quality/water allocation coordination study report; draft availability. **AUGUST 30, 1979 - NOTICES:** Air quality implementation plans; approval and promulgation. Prevention of significant air quality deterioration (PSD); permit approvals. Meetings: Interagency Toxic Substances Data Committee. Pesticide appliator certification and interim certification; State plans: Connecticut. Pesticide registration, cancellation, etc: Benomyl, Trifluralin, Trifluralin/treflan Water pollution control: Clean Water Act; assessment of civil penalties for discharges of oil, etc; agreement with Coast Guard; republication. **AUGUST 31, 1979: RULES:** Air pollution; standards of performance for new stationary sources: Asphalt concrete; standards review. **NOTICES:** Air pollution control, new motor vehicles and engines: Federal certification test results, 1979 model year, correction. Environmental statements; availability, etc: Agency statements, weekly receipts Meetings: Science Advisory Board. Pesticide applicator certification and interim certifiation; State plans: Colorado and Nebraska; training programs for recertification; policy statement. **SEPTEMBER 4, 1979: RULES:** Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc: Editorial amendments, correction. **NOTICES:** Air pollution; ambient air monitoring reference and equivalent methods applications, etc: Nitrogen dioxide (NO_2) Air quality implementation plans; approval and promulgation: Prevention of significant air quality deterioration (PSD); permit approvals. Environmental and conservation in the Federal Nonnuclear Research and Development Program; hearing. Meetings: FIFRA Scientific Advisory Panel. Science

FEDERAL REGISTER - CONTINUED

Advisory, Board; postponement. Pesticides: emergency exemption applications: Permethrin. Toxic and hazardous substances control: TSCA Interagency Testing Committee report to EPA; priority list for chemical substances testing: correction. **SEPTEMBER 5, 1979 - PROPOSED RULES:** Air quality implementation plans: State implementation plans; requirements for preparation, adoption and submittal and approval and promulgation. Air quality implementation plans; approval and promulgation; various States, etc; Florida; correction. Air quality implementation plans; delayed compliance order; Pennsylvania. **NOTICES:** Environmental statements; availability, etc: Agency statements review and comment (2 documents). Water pollution; effluent guidelines for certain point source categories: Mushroom processors; petition denial. Water quality standards, State programs: Oklahoma; approval. **SEPTEMBER 6, 1979 - RULES:** Air quality implementation plans; approval and promulgation; various States, etc: Montana, Wyoming. Air quality implementation plans: delayed compliance orders: Louisiana. **PROPOSED RULES:** Air quality implementation plans; approval and promulgation; various States, etc: Florida et al. Missouri. **NOTICES:** Air pollution control: Clean Air Act; local or regional economic disruption and unemployment prevention in Ohio: reproposed determination. Pesticide registration, cancellation, etc: Hefty dog/cat repellant. Pesticides; tolerances in animal feeds and human food: American Cyanamid Co. **SEPTEMBER 7, 1979 - Rules:** Air quality implementation plans; delayed compliance order: Texas. Water pollution; effluent guidelines for certain point source categories: Electroplating. Water pollution control; National discharge elimination system and State program elements; Secondary treatment requirements modification; discharges into marine waters; EPA position on Native Alaskan Villages. **PROPOSED RULES:** Air quality implementation plans; approval and promulgation; various States, etc: Idaho, Iowa. **NOTICES:** Air pollution; standards of performance for new stationary sources: Sulfuric acid plants. Air quality implementation plans; approval and promulgation: Prevention of significant air quality deterioration (PSD); final determination. Environmental statements; availability, etc: Agency statements, weekly receipts. Privacy Act; systems of records. **SEPTEMBER 10, 1979 - RULES:** Air pollution; standards of performance for new stationary sources: Gas turbines, Water pollution control: Conventional pollutants list; additions, deletions, etc.; correction. **NOTICES:** Environmental statements; availability, etc: Agency statements; review and comment (2 documents). Meetings: Administrator's Toxic Substances Advisory Committee. Water pollution: Toxic substances; water quality criteria; inquiry; correction. Water pollution control; safe drinking water, public water systems designations: California. **SEPTEMBER 11, 1979 - PROPOSED RULES:** Air quality control regions, criteria and control techniques: Attainment status-designations. Water pollution control: State underground injection control programs; extension of time. **NOTICES:** Meetings: Science Advisory Board. **Federal Election Commission. NOTICES:** Meetings; Sunshine Act. **SEPTEMBER 12, 1979 - RULES:** Air programs; fuel and fuel additives. Gasoline refineries lead phase-down regulations. Air quality control regions; criteria and control techniques: Attainment status designations. **NOTICES:** Air pollution control, new motor vehicles and engines: Federal certification test results, 1979 model year; correction. Air quality implementation plans; approval and promulgation: Prevention of significant air quality deterioration. (PSD); final determination (4 documents). Environmental statements; availability, etc: Twining Water and Sanitation District, N. Mex; wastewater treatment facilities. **SEPTEMBER 13, 1979 - RULES:** Air pollution control, new motor vehicles and engines: Carbon Monoxide emission standard for 1981 and 1982 model years light-duty vehicles. Air quality implementation plans: approval and promulgation; various States, etc: Idaho, Oregon, and Washington; correction. Water pollution control: Solid waste disposal facilities and practices; classification criteria. **PROPOSED RULES:** Air quality implementation plans; approval and promulgation; various States, etc: Texas; extension of time. Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc: Chlopyrifos, Water pollution control: Solid waste disposal facilities and practices; classification criteria. **NOTICES:** Air pollution control, new motor vehicles and engines: 1981 light-duty vehicles NOx emission standards; applications for waiver of effective date. Air quality implementation plans; approval and promulgtion: Nevada; emergency suspension of disapproval. Environmental statements; availability, etc: Agency statements; review and comment (3 documents) Pesticide registration, cancellation, etc.: POLADO. Pesticides; experimental use permit applications: Permethrin, etc. Pesticides; tolerances in animal feeds and human food: U.S. Borax Research Corp. **SEPTEMBER 14, 1979 - PROPOSED RULES:** Air quality control regions, criteria, and control techniques: Attainment status designations (2 documents). **NOTICES:** Air quality implementation plans; approval and promulgation: Prevention of significant air quality deterioration (PSD); final determinations. Environmental statements; availability, etc: Agency statements, weekly receipts. Water pollution control: Safe drinking water; New Jersey Coastal Plain Area: designation decision; inquiry.

FINDINGS OF NO SIGNIFICANT IMPACT

Project Location	Estimated Project Cost	Potential EPA Share
Albers, IL	Design: $29,600 Construction: $393,300	Design: $22,200 Construction: $294,975
Lebanon, IL	Design: $127,800 Construction: $1,886,900	Design: $95,850 Construction: $1,415 175
Morristown, IN	$374,900	$281,175
North Salem, IN	$1,261,160	$945,870

A Finding of No Significant Impact (FNSI) is a notification to the public, prior to the grant award, that EPA believes the project's environmental impacts are not significant and that, as a result, an Environmental Impact Statement is not needed.

If you have comments or questions regarding the above projects, contact Eugene Chaiken, Chief, Facilities Planning Branch at EPA Region V offices in Chicago (312) 353-2124.

CORRECTION

UPDATED EPA NUMBERS - AIR & HAZARDOUS MATERIALS

David Kee .... (312) 353-2212

(See *Environment Midwest*, September 1979, p. 17.)

NOV's

- Indiana Power & Light Co. (IPALCO), Petersburg, IN; particulates and sulfur dioxide.
- Shell Oil Co., Wood River, IL; hydrocarbons.
- Indiana & Michigan Electric Co., Lawrenceburg, IN; visible emissions.
- Cities Service Co., Toledo, OH; hydrocarbons.
- Olin Corp., Covington, IN; particulates.
- Texaco, Inc., Lockport, IL; hydrocarbons.
- Marathon Oil Co. (three NOVs), Arlington Heights, Willow Springs, and Robinson, IL; hydrocarbons.
- Marshfield Electric & Water Dept., Marshfield, WI; particulates.
- Minnesota State Prison, Stillwater, MN; particulates.
- Total Petroleum, Inc., Alma, MI; particulates.

A Notice of Violation (NOV) is an official warning from the EPA that a source is not complying with existing air pollution control regulations.

1979 calendar

OCTOBER 18
INDIANAPOLIS POWER & LIGHT CO. — PUBLIC HEARING, regarding EPA's preliminary approval of the proposed Patriot power plant. The hearing will address only the company's scrubber design for reduction of air pollution. Switzerland County Courthouse, 7 to 10 p.m. **Vevay, IN.** Contact Kay Kamalick, Air Enforcement, U.S. EPA Region V, 230 S. Dearborn St., Chicago, IL 60604; (312) 353-2303.

OCTOBER 22-24
RIVER BASIN WATER PLANNING AND MANAGEMENT. A joint U.S./U.S.S.R. symposium, with focus on comparative studies of the water protection planning methods and approaches of both countries, stressing the technological, regulatory, and institutional constraints. Also, some of Soviets' treatment technologies and pollution abatement methods not generally applied in the U.S. will be presented. Representatives of the Soviet equivalent of EPA will participate. **Cambridge, MA.** Open to anyone interested. Contact Sharon Moore, Water Quality Branch, U.S. EPA Region I, JFK Federal Building, Boston, MA 02203; (617) 223-5130.

NOVEMBER 7-9
WATER QUALITY ASSESSMENT, an EPA Technology Transfer Workshop. Holiday Inn, 300 E. Chicago Ave., **Chicago, IL.** Contact Clifford Risley, U.S. EPA Region V, 230 S. Dearborn St., Chicago, IL 60604; (312) 886-4625.

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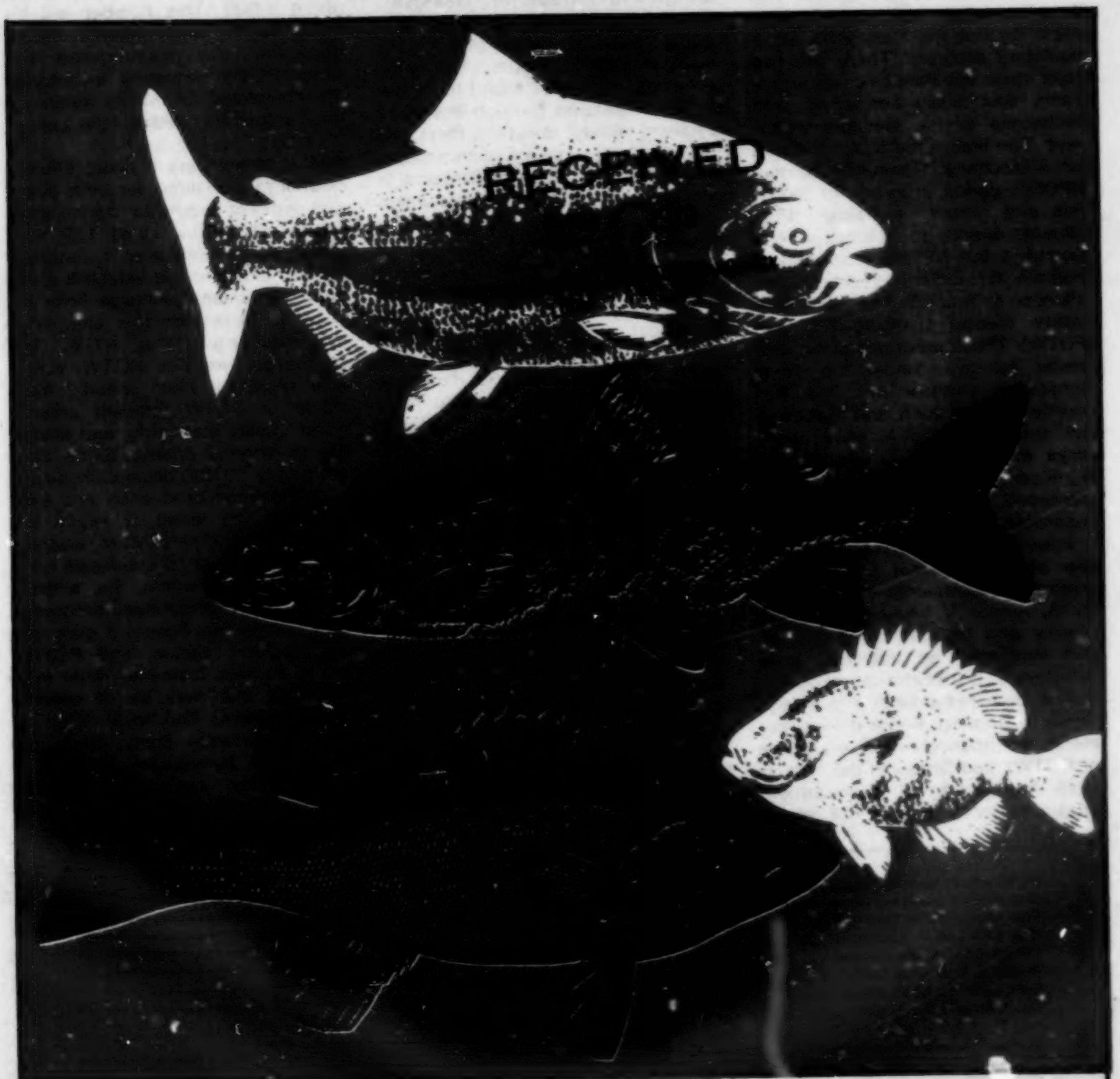
December 1979

EPA ENVIRONMENT MIDWEST



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Fish can tell: new emphasis on biomonitoring (story on p. 4)

Industrial Toxic Substances Pretreatment Program: An Update

By Glenn D. Pratt

As a Nation, we have recently become increasingly aware of the need to control the use, discharge, emission, and disposal of toxic and hazardous substances. In response to this need, Congress and the State legislature have enacted laws which lay out the framework for a regulatory program. There are two major toxic substances control programs specifically concerned with discharges to the Nation's waterways. The first is the National Pollution & Discharge Elimination System (NPDES) permit program for industries and others discharging their effluents directly to waterways. The second is the NPDES pretreatment program for industries discharging effluents to municipal or other privately owned treatment works (POTW). These programs along with similar initiatives under the Toxic Substance Control Act, the Resource Conservation and Recovery Act and the Clean Air Act, are a major effort to control and prevent significant human health and environmental damage from toxic and hazardous substances.

Even before the formal promulgation of the national pretreatment program requirements on June 26, 1978, Region V had been working closely with the States to develop and implement an industrial toxic substance pretreatment program that is both reasonable and timely. While proposed Federal requirements are relatively new, a number of POTWs and States in the Region have had industrial pretreatment programs for a number of years. These pretreatment programs were developed because of treatment process upsets, state effluent water quality requirements, damage to collection or treatment systems, or danger to personnel. However, these programs were not always adequate since a number of toxicants such as PCB, cadmium, chlorinated organics, etc., were found to be capable of passing through treatment systems without upsetting them and subsequently causing environmental damage in the receiving streams or via the contaminated sludges which were generated in the municipal treatment processes.

Program Magnitude

In the nearly one and a half years since the promulgation of the pretreatment program regulations, the States and Region V have developed a better estimate of the magnitude and direction of the program. Without question, the industrial toxic substance pretreatment program will be a major program affecting many industries and municipalities, particularly in the older cities in the midwest and east. Ohio and Illinois, along with New York in Region II, have the largest number of industries — some 90,000 total — potentially affected by the pretreatment program. These States are followed closely in the number of significant industries by Michigan and Indiana. Though Wisconsin and Minnesota have somewhat fewer affected industries, they are still estimated to be within the top 20 States in the country.

Approximately 650-800 POTWs in Region V are expected to be required to develop at least a preliminary pretreatment program, with most POTWs developing full programs. Since accurate national program estimates did not exist, Illinois was first to develop a listing of its facilities (some 25,000) within industrial catagories covered by the pretreatment program. After further detailed evaluations with Region V and EPA headquarters staff, the number of Illinois industries which are expected to be effected by pretreatment is now estimated to be about 3,000. This number will be better defined when national effluent guidelines are promulgated and when POTW industrial inventories are completed to identify additional local industries needing follow up.

National - Local Effort

EPA is developing national effluent discharge guidelines for both direct and indirect industrial dischargers. These will be for some 129 toxicants in 34 industrial categories. These guidelines will establish a uniform maximum discharge level for each of these industrial categories that discharges to a POTW. The discharger and/or POTW would also need to meet specific local (State or POTW) effluent criteria, water quality standards, and sludge use or disposal criteria. Since there are nearly 50,000 distinct chemicals in commercial production and use, it is not the intent or within the present ability of EPA to address this vast number of chemicals on a national basis within the NPDES permit and pretreatment programs. Rather it is the Agency's plan that the Regions, States, and POTWs are to address toxicants, other than the 129, that may be of specific local concern. The local effort is needed because many chemicals are only manufactured at one or a few locations, because there may be a particular type of industry or toxicant concentrated in an area or

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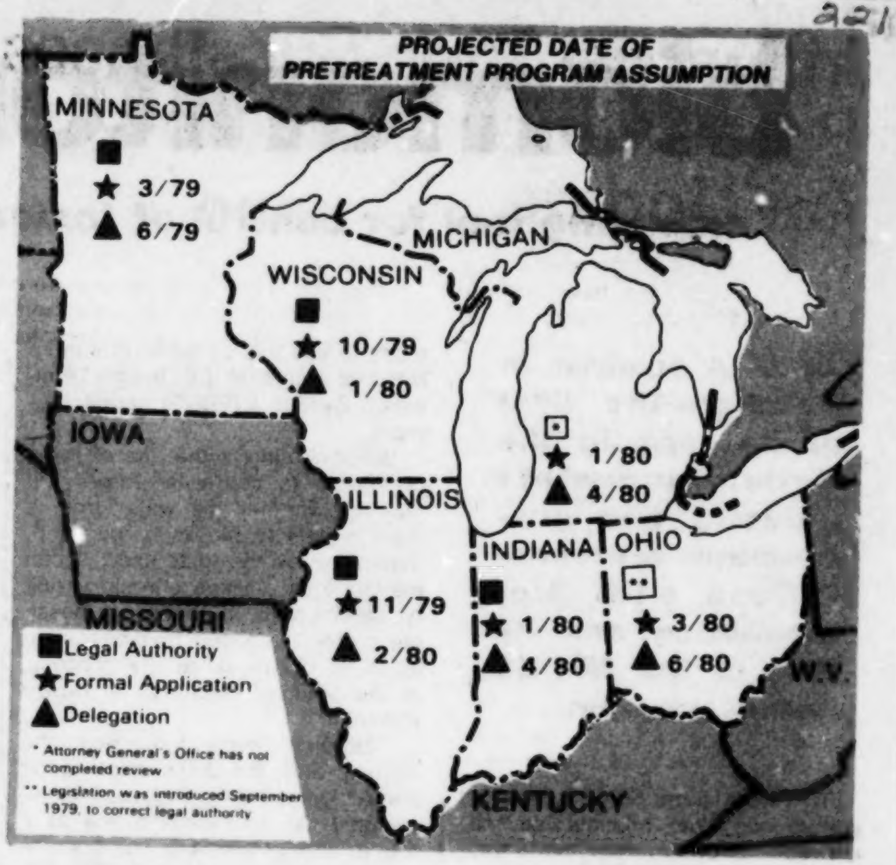


PROJECTED DATE OF PRETREATMENT PROGRAM ASSUMPTION

* Attorney General's Office has not completed review

** Legislation was introduced September 1979, to correct legal authority

because of local water quality requirements.

Effluent Guidelines Promulgated

The first of the revised industrial effluent guidelines to more fully address toxicants has been promulgated and became effective on October 9, 1979. These guidelines are for the electroplating industry, which is the largest industrial category anticipated to be regulated under the pretreatment program. These guidelines and standards will probably affect several thousand industries within Region V. Facilities within this and other categories must, within 180 days from the effective date of each promulgated guideline, submit information regarding their facilities as required by the general pretreatment regulations. This includes a statement from each of the affected industries as to whether or not they are meeting the discharge limitations. If not, they must submit a compliance schedule and they will have up to a maximum of three years to comply. Local limitations may, and likely will have, an earlier compliance date. A few other industrial categories were published this fall, with the remainder being scheduled in 1980.

Construction Grants

Limited construction grants funds are available to assist POTWs in developing their pretreatment programs. Implementation of the local POTWs pretreatment program is to be paid for by charges to the industries affected by the local program. Grants for the program development can be requested by recipients of existing active Step 1 (planning), Step 2 (design), or Step 3 (construction) construction grants. Of particular importance to a POTW is that after June 1980 new Step 2 grants can not be given to a POTW that is required to develop a pretreatment program until an adequate industrial inventory, among other things, has been completed. Also, after December 1980, to receive a new Step 3 grant these POTWs must complete all of the technical development required for preparation of an approvable pretreatment program application.

Modification of Regulations

On October 29, 1979, revisions to the pretreatment regulations were proposed in the *Federal Register*. These revisions are based on a consent decree with the Chemical Manufacturing Association, and along with other revisions surfaced by public comment are expected to clarify the regulations to assist facilities in their implementation programs. Any comments on the pretreatment regulations should be sent to Bill Diamond, EN-336, U.S. Environmental Protection Agency, 401 M Street SW, Washington, DC 20460.

State Implementation Status

NPDES States were required to submit their pretreatment programs to EPA by March 1979. Minnesota was the only State in the Nation to meet this regulatory deadline. While other Region V States did not fully meet the deadline, they have all initiated a major effort to develop and implement the pretreatment program. The States' difficulties have centered on the lack of staff and funding and on the time required in completing the initial determination of program magnitude. The reduction in Federal water program (Section 106) support along with tight State budgets have been major factors. Region V States have assigned staff and, for most purposes, are implementing various parts of the program. All States have contacted affected POTWs and have initiated information transfer programs through statewide technical or administrative conferences. In addition, except for Ohio, which is scheduled for December, each State has met individually or regionally with the POTWs which have been designated to operate pretreatment programs. Region V States have been very active in working with regional and headquarters EPA staffs to develop, modify as necessary, and implement pretreatment programs that recognize the time, staff, and resource constraints facing them. Within the existing staffing and funding constraints, these efforts have, in general, been a success.

Conclusion

The NPDES industrial pretreatment toxic substances control program is a critical part of the national effort to control the discharge of toxicants which may harm human health or the environment. The modified pretreatment regulations lay out an extensive but workable program for EPA, the States, municipalities, and sanitary districts to control the discharge of toxicants.

Glenn D. Pratt is chief of the Permit Assistance Section, EPA Region V, and Regional pretreatment coordinator.

biomonitoring:

emerging tool for control of toxicants in water

An EPA seminar in Chicago--the first of its type in the Nation--acquaints industry and government representatives with biomonitoring and its role in the NPDES permit program.

There are some 50,000 chemical compounds used commercially nationwide. Of that number, more than 12,000 are suspected toxicants and another 1,500 are thought capable of causing cancer. Plus, there are a number of others that may be harmful to aquatic life.

Many of them wind up being discharged with wastewater into our lakes and streams. Individually, or in combination with others, these toxicants can pose a health hazard. While some of the health hazards of individual toxicants are well documented, there is relatively little knowledge of the synergistic effects certain toxicants may have. That is, what effects could two or more toxicants produce when they combine forces rather than when they act individually?

Biological monitoring, or biomonitoring, in conjunction with other tools such as process evaluation and chemical analysis, can help answer this and many other questions relating to toxicants and their effects upon nature and man.

Almost 450 consultants, representatives of industry, and Federal, State, and local government officials came to Chicago on October 2 to attend EPA's Biomonitoring Seminar, to learn not only about biomonitoring itself but also how EPA intends to use this scientific tool in its National Pollutant Discharge Elimination System (NPDES) permit program.

Biomonitoring is the use of living organisms to test water quality. It can tell whether the water from a plant is safe to be discharged and, depending on the tests used, it can identify less obvious chronic toxicity, carcinogens, mutagens, or possible problems caused by bioaccumulation of chemicals at the process, at the point of discharge or downstream.

"Although many industries, the States, and the EPA have done some biomonitoring, the need for increased use of biomonitoring as a tool to control toxicants has become increasingly evident," said EPA Region V (Midwest) Administrator John McGuire in his opening remarks.

"Region V, along with the States, is now working to implement a program to address those toxicants outside the national priority pollutant listing which may be of Regional or local concern because of unique industrial processes or concentrations of industries," he said. "Biomonitoring and industrial process evaluation are some of the tools being utilized to evaluate the potential for toxicant discharge."

Sandra S. Gardebring, enforcement director for EPA's Region V, said that EPA intends to use biomonitoring for both discovering and limiting the discharge of toxic substances. (EPA's authority for requiring biomonitoring comes from Section 308 of the 1972 Clean Water Act.)

There are between 500 and 600 major industrial dischargers of wastewater in Region V, Gardebring said, and these "provide a natural place to start." Among industries that may require biomonitoring she named manufacturers of chemicals, pharmaceuticals, pesticides, plastics, iron and steel, rubber, chlor-alkali, and paper.

Some industries previously classified as minor dischargers will also come to EPA's attention. "We believe there are more than a few of those dischargers that may contain significant contaminants and require closer scrutiny than they have received in the past. Again, a careful evaluation of the facility, the manufacturing process involved, present treatment, and the likelihood of a toxicant being in the discharge will

EPA Photo

The goal of all biomonitoring: fishable and swimmable waters.

be necessary before biomonitoring is required," Gardebring said.

Industries that discharge directly into the Great Lakes or its tributaries will receive priority evaluation as candidates for biomonitoring.

"I am particularly concerned that efforts to control persistent substances be given an extremely high priority in the Great Lakes Basin," said EPA Regional Administrator McGuire. He reminded seminar participants that the U.S.-Canada Great Lakes Water Quality Agreement of 1978 calls for increased attention to and vigilance in the control of toxic substances in the Great Lakes area.

"While there is an absolute need for heavy emphasis on the Great Lakes, we are also aware that significant efforts are needed in our major basins, such as the Ohio River Basin," McGuire said. "To a lesser extent, efforts are also needed in the Mississippi River Basin."

The need for biomonitoring will be largely determined on a case-by-case basis, Gardebring said. "Once the determination is made that biomonitoring is needed, then the specific test or series of tests must also be determined," she explained. In some cases more than one type of test may be prescribed; for example, concurrent tests for chronic low-level toxicity and long-term bioaccumulation. EPA estimates that currently between 15 and 20 industries may be subject to long-term bioaccumulation tests. (They measure the storage of substances in the bodies of fish and other organisms.) Also, between 150 and 200 industries may require other forms of biomonitoring after individual review.

Gardebring noted that, in general, State water quality standards specify that effluents cannot cause acute toxicity within the mixing zone (area in which effluents mix with the stream before it has to meet the basic stream standard). Most States specify that the concentration of a substance at any point within the mixing zone must not exceed the 96-hour median tolerance limit (TLM) for that substance. "We interpret these requirements to mean that the discharge at the end of the pipe must not be acutely toxic," she said.

In addition, she explained, State water quality standards require that concentrations of substances outside the mixing zone must not exceed 1/10 of the 96-hour TLM after mixing (outside the prescribed mixing zone).

"These standards will be used to develop limits for appropriate toxicants," Gardebring said. "For some toxicants we will have the information necessary to develop applicable control levels for protecting aquatic organisms and human health. For others...we will have to work with the States and industry to develop applicable control levels, based on data derived from biomonitoring, hazard assessment, process evaluations, and toxicity reduction plans."

Addressing those industry representatives who may be most affected by the new biomonitoring requirements, Gardebring said: "We believe it is to your advantage not to wait. We believe it is to your advantage to seize the initiative before the States or EPA knock at your door." This way, valuable time can be devoted to investigation and experimentation, to arrival at the least costly approach to biomonitoring, and to reduction of waste treatment costs, she pointed out.

Gardebring urged industry to establish priorities, emphasizing control or elimination of toxic substances, especially those that persist in the environment and may pose a health hazard to humans.

"We do not expect biomonitoring or process evaluation to suddenly appear in all NPDES permits," she said. "However, as these permits are reissued this year and in 1980-81, we will be stressing these areas, and they will begin to appear more often in permits."

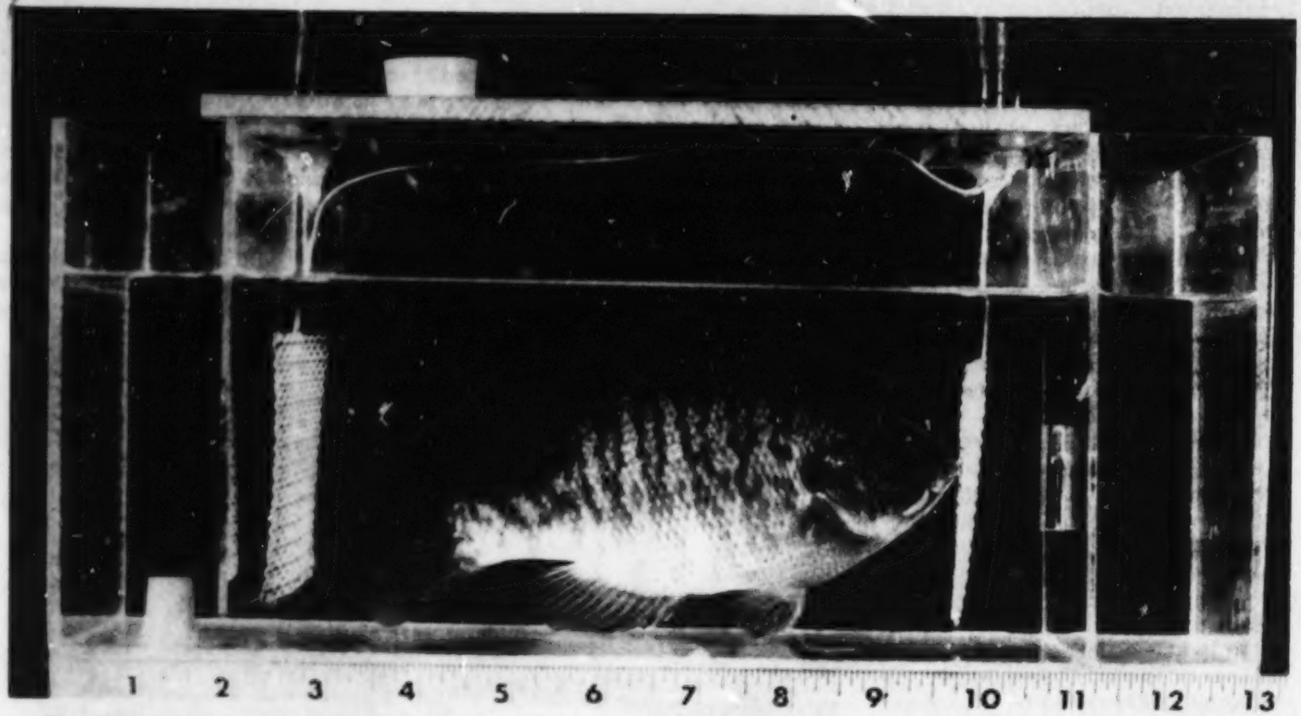
Dr. Donald I. Mount, of EPA's Environmental Research Laboratory in Duluth, Minnesota, presented a broad perspective on biomonitoring of effluents. He emphasized that biomonitoring is not a new technique, but that it will become increasingly useful in identifying and controlling toxicants.

The only sure way to measure

Continued next page

EPA photo/Leah Wilson

Aquatic Biologist Charles Steiner feeds Daphnia magna culture with a mixture of alfalfa and trout food. Daphnids are commonly used in biomonitoring tests.



Bluegill hooked up in an electrode chamber to test pollutants in wastewater. The presence of copper, for example, would quicken the fish's cough response.

toxicity in the environment is through the use of live organisms—from the coho salmon and fathead minnows to mayflies and external bacteria—he said. "Biomonitoring most closely approximates receiving water conditions and considers interactions, both positive and negative, among mixtures of substances," Dr. Mount said. In addition, biomonitoring measures target responses and promotes more efficient use of resources.

But, there are also some disadvantages, he pointed out. Biomonitoring traditionally has not measured persistence, for example, and it is more difficult to measure chronic effects of toxicants.

"We should consider toxicity as a property of wastes to be removed," said Dr. Mount, reminding that toxicity is a property of all substances.

"If all persistent contaminants were controlled, all environment control problems would be local," he said. And, "If all contaminants at toxic levels were controlled, all environmental problems would be solved."

A number of experts discussed in detail such biomonitoring tests as the static and flow-through test using fish, the static test using algae, the embryo-larval test, the Ames test, and rapid assessment methods (fish cough response, etc.).

The advantages and limitations of each test were presented, as well as the applicability of each test in real-world situations. In addition, sediment bioassay, effluent guidelines limitations and lethal units, and acquisition and culturing of test organism in the lab were discussed. Those attending the seminar gained a valuable overview of the entire biomonitoring field and the direction in which biomonitoring is heading under various EPA programs.

The panel discussion and open questions brought a lively exchange. A steel-plant engineer from Ohio complained that there is too much "regulation pollution" already and was wary about having to conduct more tests under the biomonitoring program. Glenn Pratt, chief of EPA's Region V Permit Assistance Section, said that "It's difficult to say what test and at what frequency should be conducted unless you know the particulars (products being manufactured, variation of process, control measures, etc.) of each plant. We'll take time to reach solutions as long as we're moving in the right direction."

One question from the floor was: "Why not put plain fish in the pond? And if the fish die, then you know there's a pollution problem." Walter "Pete" Redmon, an aquatic biologist with EPA Region V, answered: "PCBs, for example, and other chemicals are not especially toxic in an acute manner. They accumulate slowly in fish and may not kill the fish outright, but cause problems later. However, there are circumstances where a carefully designed use of a pond is a perfectly acceptable biomonitoring method."

Pratt explained further: "The problem is that fish may live, but we are concerned about the effects on man, when he eats fish contaminated with PCBs. These effects might not be tested in a simple pond. Besides, fish tend to acclimate to some toxicants and may not be killed at all. In the proposed program, we're trying to look at the long-term problems that might be caused by chronic exposure to low levels of toxicity."

Biomonitoring, process evaluation, and other toxicant evaluation techniques are "steps along the way to our ultimate goal: fishable and swimmable waters in all parts of this country," noted EPA's Region V Enforcement Director Sandra Gardebring.

FLOW-THROUGH TEST USING FISH

This is but one of several tests used by EPA to detect toxicants in water. The toxic substance is introduced into a dilution chamber, then goes into a mixing chamber, and finally into a testing chamber, or aquarium. This test has two variations:

1. continuous flow system, where the test organism is exposed to a source of pollutant and dilution water at all times;
2. intermittent flow system, where flow is adjusted in the mixing chamber and the pollutant is periodically removed from water.

It is usually a 96-hour test in which lab personnel look at the acute effects the pollutant produces on fish: death, immobility, changes in behavior, and so on. The test most often uses bluegills, fathead minnows, and trout.

Life cycle studies, multiple (additional levels of) testing, avoidance tests (with low-level pollutants), and complex effluent testing are all possible with the flow-through method. The EPA laboratory in Athens, Georgia, for example, is currently looking at complex effluents—a "witches brew of compounds, as many as 60 of them not listed in NPDES permits," says William Peltier of the lab's staff.

Advantages of the test are excellent precision and control, the ability to test larger fish, the ability to follow a degradation process, and evaluation-monitoring on a continous, daily basis.

Compared with the static test using fish, the flow-through test requires a slightly higher degree of technical expertise and more sophisticated equipment; it needs large amounts of dilution water and is a bit more time consuming. It is also more expensive: from $400 to $1,500 for a four-day test; up to $15,000 for a 10-day tests.

Nonetheless, the versatility and other advantages of this test outweigh its limitations.

GUINEA PIGS OF THE WATERY WORLD

EPA uses two types of aquatic "guinea pigs" in biomonitoring: fish and invertebrates. Of the freshwater fish, rainbow trout and fathead minnows are most popular, followed in no particular order by coho salmon, brook trout, goldfish, channel catfish, and bluegill. Daphnids are the most common freshwater invertebrates used, but crayfish, amphipods, clams, stoneflies, mayflies, and midges are used as well.

There is also a recommended list of marine (saltwater) and estuarine species for biomonitoring tests. In the fish family, we have English sole, flounder, shiner perch, mummichog, Pacific staghorn sculpin, and others. Among the invertebrates are shrimp, blue crab, and Atlantic and Pacific oysters.

In the Midwest, of course, EPA deals strictly with freshwater specimens. They must be healthy, relatively free of pollutants, and contain as many nonvariable characteristics as possible. Dilution water, from a lake, stream or well, must also be of high quality.

The test organisms must be shielded from excessive noise and must get the proper diet. Fiberglass tanks are best; they're movable, durable, and versatile.

The fish are obtained from the laboratory's own breeding tanks, from a hatchery, or from the wild. Those cultivated in the lab are the most reliable, says Charles Steiner of EPA's Central Regional Laboratory in Chicago. The lab-grown fish provide a constant supply, have a documented life history, are relatively stress-free and — most important — are maintained in a disease-free environment.

Two minor disadvantages of raising your own test organisms: about a $700 start-up cost and the continuous need for lab personnel to maintain the operation.

"If you're going to get your specimens from a hatchery, choose one that promotes inbreeding of parent stock rather than supplies from the outside," advises Steiner. "Fish from a hatchery should be several generations removed from the wild."

The disadvantages of hatchery supplies include the fact that transporting fish puts a stress on them, and the size of fish you want may not always be available, he says.

Specimens from the wild population are least desirable. They may be contaminated, hybridized, and least dependable as a source.

All fish procured from the outside must be quarantined for 10 days to prevent disease; they must undergo a prophylactic treatment.

As for invertebrates, they are difficult to maintain in the lab for any length of time and they also don't travel well, says Steiner. Daphnids, the most popular freshwater invertebrates for biomonitoring purposes, can be obtained from biological supply houses.

Whether it's fish or invertebrates, a thorough log should be kept on all organisms. "Good quality-control practices are most important," says Steiner. "They make the job of biomonitoring much easier".

EPA's New Lab Tackles Toxic Wastes

Modern, flexible, and geared to present and future needs, EPA's new $2.3 million Test and Evaluation Facility in Cincinnati has a host of important projects under way and a series of ambitious plans for the years ahead. It serves both the Municipal Environmental Research Laboratory and the Industrial Environmental Research Laboratory.

From the outside it may look like a well-designed factory building; from the inside, it is a maze of pipes, ducts and huge tanks you would expect to find in a tank-truck terminal. But in reality, the new facility, sitting on the grounds of Cincinnati's Mill Creek Sewage Treatment Plant, is EPA's latest effort to find out more about toxic wastes.

"This lab represents a whole new approach to experimental testing," says Dr. Irwin Kugelman, chief of the Pilot and Field Evaluation Section at EPA's Municipal Environmental Research Laboratory (MERL).

Kugelman said the lab, which only became operational this past summer, already has a heavy list of pressing assignments, including: studying 30 of the 129 national priority pollutants, evaluating the possible treatment of sanitary landfill leachate in a conventional treatment plant, evaluating the effects of five types of ozone contactors, and studying several sludge dewatering techniques.

Kugelman says the laboratory has been built to allow test stations to be erected and disassembled rapidly. This is a departure, he says, from the old pilot-plant approach where a separate plant is built to deal with a specific environmental problem.

What made the new testing lab so appealing to EPA to begin with is the series of tunnels that crisscross the Mill Creek Plant. And that made it economically feasible to tap into various waste streams.

The test facility has access to eight waste treatement streams, including primary and secondary effluent, plus four kinds of sludge and waste liquor.

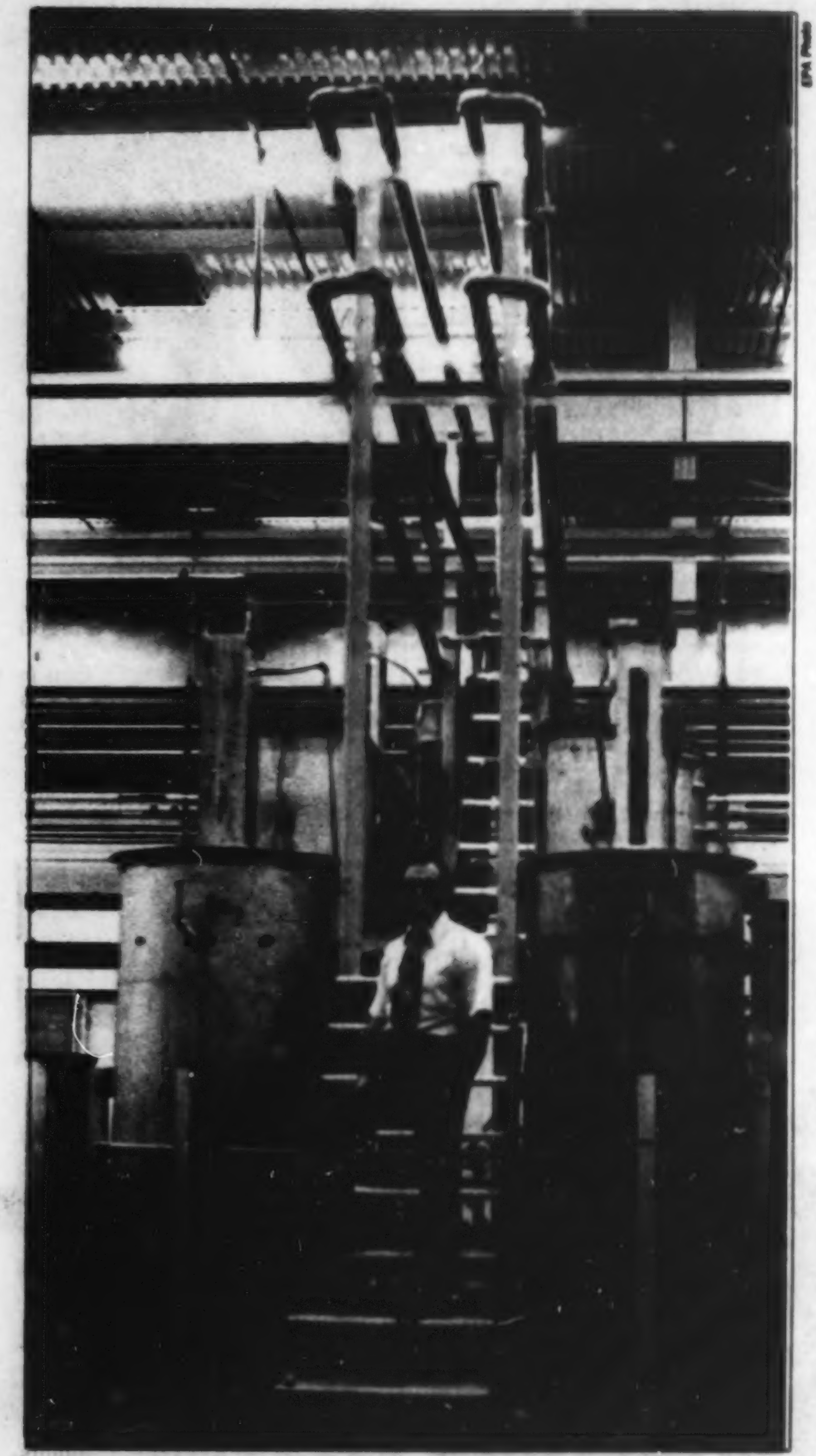
The City of Cincinnati provided land for the 30,000-square-foot facility for 20 years at no cost. The waste pipes run through the new building on a central pipe rack, and any of them can be made available at each of the 16 stations distributed around the facility.

Research and development activities scheduled for Fiscal Year 1980 include four main projects:

1. A study of priority pollutants in conventional sewerage systems is being done at the request of EPA's Office of Water Planning and Standards to aid them in establishing permit regulations for discharge into public sewer systems. Its basic goal is to establish a mass balance for the partition of these pollutants among air, liquid, and solids. Sewage entering these units is spiked with various priority pollutants.

EPA Photo

Al Petrasek, chief of EPA's Rural MERL Projects.



EPA Photo

Dr. Irwin Kugelman at EPA's Cincinnati lab, among apparatus set up to test priority pollutants in sewerage systems and conventional treatment plants.

Samples of the liquid, sludge, and air are periodically collected to discover how these materials become distributed and the degree of biodegradation.

2. MERL is evaluating the feasibility of treating sanitary landfill leachate in a conventional treatment plant. Collection and discharge of this source of water pollution into the municipal sewer system has been suggested as a pollution control management option, provided the municipal wastewater treatment can still meet permit discharge standards. One of two parallel activated sludge systems will receive gradually increasing additions of leachate to the normal sewage feed; the other will serve as a control. Detailed monitoring of both units will establish the potential effect of the leachate, as well as the economics of the process.

3. The relative effectiveness of five different generic types of ozone contactors is also being evaluated. Use of ozone for disinfection of wastewater has been suggested as an alternative to chlorination in order to avoid disturbances in the natural aquatic environment which occur downstream of an outfall of chlorinated wastewater. In addition, chlorination of treated wastewater may result in the appearance of priority pollutants in the effluents.

Data on the relative economic efficiency of these different contactors will serve as a guide in the review of designs of ozone disinfection systems. Filtered and unfiltered secondary effluent will be fed to five parallel ozonation systems. Ozone transfer efficiency and disinfection efficiency will also be monitored in the presence of varying levels of solids, organics, and nitrogen forms.

4. Several dewatering techniques will be evaluated on various sludges using a vacuum filter, a filter press, a solid bowl centrifuge, and a basket centrifuge, all mounted on a trailer. After completion of these

Continued next page

studies, the trailer will be moved to a number of other treatment plants to repeat the tests. The data produced should aid in development of models for sludge dewatering devices.

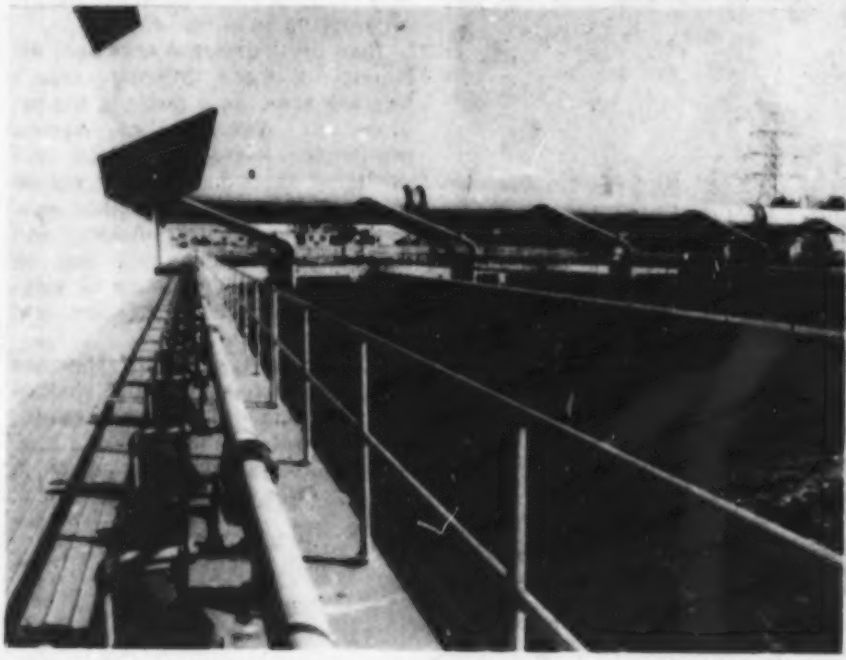
Projects planned for the future include:

- the use of physical-chemical treatment technology for removal of priority pollutants from secondary effluent
- evaluation of fluidized or expanded bed biological contactors for treatment of wastewater
- fate of priority pollutants in sludge handling processes
- evaluation of automated control strategies for water pollution control systems, and
- evaluation of microprocessors and new computer technology for automation of treatment systems.

Kugelman says that long-range plans for the facility include installation of automatic monitoring and test microprocessors to monitor and control several treatment plant functions. "With this type of automation," he goes on, "we can cut down on the need for on-scene scientists."

Participating with MERL in running the new Cincinnati facility is its industrial counterpart — the Industrial Environmental Research Laboratory. Its chief at the test facility, Clyde Dempsey, lists a number of projects including:

- biological treatment of toxic organic constituents of wastewater
- quantification of volatile organic compound emissions from cold cleaning degreasing systems
- silicate fixation of metal pollutants
- use of carbon adsorption to remove toxic organic materials from wastewater
- evaluation of surfactant scrubbing as a treatability method
- evaluation of steam stripping to remove toxic organics from wastewater
- leachability and revegetation of solid waste from mining
- pilot-scale conversion of mixed hazardous wastes to energy
- the adsorptive characteristics of coal: control technology for insitu coal gasification effluents, and
- shakedown of various unit processes for the treatment of oil shale wastewaters. ♣



One of the effluent channels at Cincinnati's Mill Creek Plant.

SHINING BRIGHT

His real job is not table polishing, but EPA's Cincinnati Lab Chief Dr. David Stephan is very interested in the sheen on the fancy new conference table in his office. The reason is that the table is one of dozens of furniture products EPA had specially made using water-based finishes.

If the furniture industry changed over from solvent-based finishes, EPA air planners believe 200,000 tons of hydrocarbons per year could be eliminated. The problem is that the furniture lacks the high gloss that manufacturers believe consumers want. "You can get the gloss with water-base finishes," says EPA's Mike Strutz, "but it takes lots of rubbing."

"BLACK BOX"

to the rescue

EPA is testing a new reactor device that may prove to be a boon to the electroplating industry as it faces new guidelines for the pretreatment of wastes. An EPA-funded "black box" — to handle difficult waste streams containing such toxic pollutants as cyanide, chromium, copper, cadmium, zinc, lead, and nickel — is currently undergoing rapid development and demonstration at Varland Metal Services of Cincinnati.

The black box — an electrochemical reactor developed by HSA Reactors Limited of Toronto — can be attached like a filter to the plant's waste streams and has the potential to almost totally remove the plating operation's pollutants without generating a metal-bearing sludge.

HSA is cautiously optimistic about commercializing the device within the next 18 months. It isn't saying what it may cost, but guesses start in the neighborhood of $12,000 to $15,000.

The HSA black box couldn't come at a more opportune time, since EPA in September 1979 promulgated pretreatment guidelines for the electroplating industry that are considered quite stringent. The regulations, as issued, will apply to pretreatment of wastewater prior to discharge to municipal treatment plants.

An economic analysis accompanying the pretreatment standards indicated that almost 20 percent of plating job shops in the U.S. could be closed due to the costs of meeting those regulations.

EPA's manager for this demonstration project, George S. Thompson, Jr., says the HSA electrochemical reactor has thus far shown that it can reduce the final discharge of cadmium to as low as .04 parts per million, which is within the acceptable limits for the proposed regulations.

The secret of the reactor, according to Dr. Bernard Fleet of HSA, is the development of a small, highly compressed core of carbon fiber with an enormous surface area that will pick up the toxic plating pollutants. "These reactors," says Fleet, "contain more surface area than does Chicago's Sears Tower."

EPA's Dr. Anil Mehta with HSA "black box."

EPA's Thompson says that while the HSA reactor is extremely important as a technological innovation, "simple housekeeping" in electroplating shops is just as important in reducing pollution in plant effluents. Scott Roof, chief engineer for Varland, says that housekeeping improvements at the Cincinnati plant have cut down waste flow by at least 40 per cent. "The in-plant process changes already make this a success story," adds Thompson.

One group keeping a close eye on the Varland-EPA demonstration is the National Association of Metal Finishers, which initially brought HSA to the EPA's attention and is the recipient of an EPA grant to demonstrate the reactor. EPA's share in demonstration costs at Varland is $150,000.

For further information on the status of this important demonstration, you may call Thompson at (513) 684-4491 or write to him at: EPA, Industrial Pollution Control Division, Metals and Inorganic Chemicals Branch, 26 W. St. Clair Street, Cincinnati, Ohio 45268.

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United States
Environmental Protection
Agency

Region 5
230 South Dearborn Street
Chicago, Illinois 60604

Illinois, Indiana,
Michigan, Minnesota,
Ohio, Wisconsin

EPA

GUIDE FOR BUSINESS & INDUSTRY

Keeping up with EPA regulations, research and development, and other activities that may affect business and industry can be difficult — if you don't know where to look for information. This fact sheet is meant to guide you in the right direction.

Nationwide EPA Information

Environmental Research Information Center (ERIC)

Since its inception EPA has been active in development and demonstration of industrial pollution control systems and has fulfilled its responsibility for disseminating the results. The Office of Research and Development, which designs pollution control systems and assessment methods, works closely with industry to promote their acceptance and use. EPA's Technology Transfer Program was established to bridge the gap between technology development and application. The results of EPA's Industrial Pollution Control Program are announced in the Technology Transfer Newsletter, available upon request. In 1977, the Technology Transfer Program was incorporated into the Environmental Research Information Center (ERIC), Cincinnati, Ohio 45268, focal point for technical information dissemination activities within EPA's Office of Research and Development.

Research and Development Activities

To find the answers to questions regarding EPA Research and Development activities, a good starting point is the Agency's Technical Information Division. Call Ernie Minor (513) 684-7931 or write Environmental Research Center, 26 W. St. Clair Str., Cincinnati, Ohio 45268.

Federal Register System

The Federal Register system is contained primarily in two publications. The Code of Federal Regulations is a collection of current regulations of various Federal agencies. It is divided into 50 titles that represent broad areas subject to regulatory action (Title 40 is "Protection of the Environment.") It may be purchased for $4.50. Subscription price of all titles is $350.00 per year. The Code is kept up-to-date by daily issues of the Federal Register. Regulations properly issued and published in the Federal Register have the force and effect of law. Published Monday through Friday, it makes available to the public recently issued regulations and legal notices from Federal agencies. The Federal Register is $5.00 per month or $50 per year payable in advance. For either publication remit check or money order, made payable to the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

Research Reports/ Process-Design Manuals

Hundreds of research reports are produced annually by ERIC. Many represent work in which the Agency has cooperated with industrial groups. Some examples include Mine Drainage Abatement, Activated Carbon Treatment, and Aerated Lagoons for Food Waste. ERIC's process-design manuals bring together comprehensive technical information contained in many scientific reports on environmental technology processes. Manuals are available covering such processes as Nitrogen Control, Phosphorus Removal, Carbon Absorption, and Land Treatment of Wastewater.

Technical Information

The National Technical Information Service (NTIS) of the U.S. Department of Commerce operates the largest public access scientific and technical information facility in the nation with nearly one million titles. For further information, write: National Technical Information Service, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, Virginia 22161, (703) 557-4650.

Midwest Regional EPA Information

Air Pollution — SIPs and PSD

A State Implementation Plan (SIP) is a blueprint for meeting mandatory Federal clean air standards by the December 1982 deadline. By mid-1979 each

NPDES Program

The Federal Water Pollution Control Act of 1972 set strict deadlines for cleaning up the nation's

Selling to EPA

The EPA procurement program is decentralized. The Regional Office in Chicago is authorized to make

State was to have submitted an acceptable SIP to EPA. EPA has a new cost-saving policy, known as the "bubble" concept, which allows industry to decide, under certain circumstances, the best way to clean up individual sources of air pollution at a plant — provided total emissions (as if in a bubble) stay within Federal standards. There is also the trade-off technique, under which new plants may be built in an already polluted area if other sources there are able to reduce pollution. In clean-air areas, States are responsible for administering the Prevention of Significant Deterioration (PSD) permit system, which limits the amount of air pollution allowed.
EPA contact: Ron Van Mersbergen (312) 886-6057

Pretreatment Regulations

National pretreatment regulations, announced in June 1978, require certain industries that handle or produce toxic substances to install pretreatment facilities before they discharge into a municipal treatment system. Over the next year, EPA will announce national guidelines that set discharge limits for a number of such pollutants. In some cases of compatible pollutants, industries can receive renewal credits if the local municipal system is able to neutralize such pollutants.
EPA contact: Glenn Pratt (312) 886-6107

Premarket Notification of Chemicals

Under the Toxic Substances Control Act of 1976, all companies must notify the EPA at least 90 days before they begin manufacturing or importing new chemicals for commercial purposes. A chemical is new if it is not listed in the recently published *Chemical Substance Inventory*. Exemptions exist for certain chemicals and companies. This regulation is meant to prevent potentially dangerous substances from reaching the market. Premanufacture notice forms and instruction manuals are available from EPA.
EPA contact: Paul Meriage (312) 886-6003

Emergency Spill Response

Whenever an oil or chemical spill occurs, notify Washington by calling toll-free (800) 424-8802 in order to satisfy all legal reporting requirements. Within five minutes, information is relayed to EPA's Environmental Emergency Response Center in Chicago. EPA is prepared to send a team of experts to spill sites to assist with their cleanup.
EPA contact: Russell Diefenbach (312) 353-2316

municipalities that discharge wastes into navigable waters must first obtain a National Pollutant Discharge Elimination System (NPDES) permit, which limits the kinds and amounts of pollutants that can be discharged and specifies pollution control equipment that may be needed. In EPA's Midwest Region, the NPDES permit program is administered by each of the six States. EPA directs and monitors the program but does not issue NPDES permits. However, EPA provides information on how to go about getting an NPDES permit, including whom to contact in each State.
EPA contact: Irv Dzikowski (312) 353-2105

Hazardous Waste Disposal

Final regulations governing the generation, transportation, storage, and eventual disposal of hazardous wastes are expected to be announced in December 1979. Not later than 90 days after such announcement, all companies or individuals dealing with hazardous wastes will be required to notify EPA about their hazardous waste activities. Notification forms will be available from EPA. Treatment, storage, and disposal facilities in existence on, or before, October 21, 1976 should then apply for an interim-status permit along with their notification. All other facilities built after that date may apply for permits, but they are not eligible for interim status.
EPA contact: Art Baden (312) 353-2197

Pesticide Registration

Manufacturers of pesticides (insecticides, herbicides, fungicides, germicides, and rodenticides) must register their products with EPA in Washington before any such product is marketed. EPA's Regional office in Chicago does not register pesticides but will provide pesticide registration forms, information on what tests the manufacturer must make, and other guidance.
EPA contacts: Tom Golz, George Marsh (312) 353-2192

Minority Business Enterprises

Construction contractors, suppliers, and consultants involved in projects funded by EPA must comply with guidelines of the Minority Business Enterprise program. Recently established Regional goals call for a 10 to 15 percent minority business participation, based on the total dollar amount of EPA approved contracts and subcontracts. EPA's Office of Civil Rights and Urban Affairs will explain policies and responibilities.
EPA contact: Charles Luczak (312) 353-2323

services not in excess of $10,000. Larger purchases are made in Washington, DC. Agency policy encourages wide competition and gives special consideration to small and minority businesses and to labor surplus-area concerns. Must reading for prospective suppliers is Selling to EPA, a booklet available from the Office of Public Affairs (312) 353-2072.
EPA contact: Yvonne Raskow (312) 353-8922

Small Business

Small firms, those employing fewer than 250 people, can obtain financial assistance for pollution control equipment from the Small Business Administration (SBA), and the Economic Development Administration (EDA), and the Farmers Home Administration (FHA). The SBA can make direct loans to small businesses when commercial loans are unavailable for implementing improvements required by Federal pollution control legislation. The SBA also issues a number of guaranteed pollution control revenue bonds, which can be used to finance pollution control equipment. These tax exempt bonds, issued through state or political subdivisions, can be sold at a lower interest rate than other commercial bonds. In these programs the Environmental Protection Agency certifies that the equipment is needed to comply with Federal pollution control regulations.
EPA contacts: Arnold Leder (Water) (312) 353-2114 and Eric Cohen (Air) (312) 353-2090

Public Information

The Office of Public Information publishes *Environment Midwest*, a monthly newsmagazine with articles on a varitey of environmental subjects, and the "Public Participation Printout," a biweekly listing of environmental meetings, seminars, workshops, conferences, and public hearings. Reprints form the national *EPA Journal* that cover in-depth subjects such as "Economy and the Environment" and "Health and Environment" are available. In addition, a wide selection of EPA brochures — from asbestos to water pollution — are yours for the asking. The Office of Public Information has a number of films to lend and can match appropriate EPA speakers to public meetings.

Finally, if you have any questions about EPA and don't know where to turn, call this number: (312) 353-2072

GPO 865-034

U.S.EPA, Region 5 - Graphic Arts

Environmental news briefs

WISCONSIN STEEL SIGNS JOINT AGREEMENT

EPA, the U.S. Department of Justice, and the State of Illinois reached an agreement with Wisconsin Steel Company on a program that will bring the Chicago-based company's Calumet plant into compliance with air and water pollution control regulations by 1982. In addition, this agreement will release $120 million in federally guaranteed and private sector loans to help protect over 3,800 steelworker jobs.

Under the agreement, air pollution (particulates) will be reduced by 50 percent from the Chicago plant. Water pollution (cyanide, oil, grease, ammonia, phenol compound and suspended solid discharges) will be completely eliminated. These pollutants, instead of being discharged into the Calumet River, will now go into a municipal sewage treatment plant.

Air pollution controls will be put on the plant's basic oxygen furnace, the No. 4 coke battery, the blast furnace, and the No. 4 boiler. Water pollution will be controlled by a recycling system that will clean and reuse wastewater from the blast furnaces and the rolling mill. Compliance with air pollution controls will cost the company $11 million; with water pollution controls, $23 million.

The joint agreement must still be approved by the U.S. District Court for Northern Illinois.

HOOKER TO SPEND $20 MILLION ON CHEMICAL DUMP CLEANUP

Hooker Chemical Co. agreed to spend up to $20 million to clean up and safely contain some 30 toxic chemicals buried at its 880-acre plant in Montague, Michigan. The company also agreed to give the Michigan attorney general a permanent right to approve all future uses of the disposal site.

This agreement marks the settlement of a lawsuit filed by the Michigan attorney general last February. The suit alleged that Hooker improperly disposed of the chemicals, which include hexachlorocyclopentadiene, a chemical used in the manufacture of mirex, kepone, and other toxic substances known to be hazardous to man.

The suit also charged that groundwater and soil samples near the disposal site were contaminated, and that chemicals buried at the site had contaminated local drinking water and leached into White Lake.

Under terms of the agreement, Hooker is required to construct special clay vaults for the disposal of the chemicals, to dismantle its unused plant, and to clean up contaminated groundwater. In addition, the ground, the leachate, or any leakage from the vaults must be monitored by Hooker, its parent company (Occidental Petroleum), or their successor for at least 50 years. The agreement also requires that a court-approved monitoring system be instituted to assure the quality of air, soil, and water "in perpetuity."

GM SIGNS EXTENSION AGREEMENT

General Motors Corp. signed an agreement with EPA Midwest Regional Office in Chicago that grants GM extra time to install new, innovative equipment to control air pollution at GM's six plants in Ohio. This is the first such agreement to be signed in the Midwest.

The plants are in Columbus, Hamilton, Mansfield, Sandusky, Warren, and Elyria. Particulate pollution (smoke, fly ash) at these plants would be reduced from previously uncontrolled levels of over 6,000 tons per year to under 200 tons per year with the new technology.

This agreement was signed under a new provision of the Clean Air Act. It allows EPA to give companies extra time for the installation of new-technology controls that will achieve compliance with clean air standards more effectively, at less cost or with savings in energy. The savings at one plant alone will amount to more than $1 million.

Environmental news briefs

OUTBOARD MARINE REFUSES TO CLEAN UP PCBs

The Outboard Marine Corporation (OMC) of Waukegan, Illinois, told EPA's Midwest Regional Office in Chicago that it will not take any action to prevent polychlorinated biphenyls (PCBs) in its North Ditch property from entering Lake Michigan. The company declined to assume responsibility for the cleanup.

On November 2, EPA notified OMC that the Federal Regional Response Team has determined that immediate action is necessary to prevent hundreds of pounds of PCBs from being discharged into Lake Michigan with next spring's rains and snowmelt. If OMC refused to take corrective action, the company was told, then EPA and the Coast Guard will move to prevent PCBs from polluting Lake Michigan.

EPA cited Section 311 of the Clean Water Act, which provides Federal funds for cleaning up water pollution in an emergency and which authorizes Federal agencies and the States to initiate such clean up.

OMC, which manufactures Johnson outboard motors, has over the years discharged large amounts of PCBs which now pollute the North Ditch as well as the Waukegan Harbor. A suit was filed in March 1978 which asked that OMC clean up the PCBs.

Regional Administrator John McGuire said EPA will move quickly to prevent further environmental damage.

AUTO TAMPERING CASES GO TO COURT

The Department of Justice, at EPA's request, has filed civil complaints in Federal District Court against six auto dealers and three independent auto repair facilities for tampering with emission controls on cars.

Tampering, which violates the Clean Air Act, has occurred in the Boston, Philadelphia, Baltimore, and Detroit areas. In the Midwest, the only complaint was filed against Terminue, Inc., of Bay City, Michigan. The complaints are asking a total of $67,000 in penalties.

The tampering charges involve alterations of the air pollution controls on new cars before they were sold and on other cars brought to be repaired. EPA cautions that tampering with emission controls can increase auto exhaust, decrease fuel economy, and create driving problems.

EPA is cracking down on auto tampering and reminds that new car dealers can be fined up to $10,000 for each tampered car. Owners of repair facilities, auto mechanics, and fleet operators can be fined $2,500 for each violation.

According to recent survey, about 19 percent of all cars in the U.S. violated nontampering standards.

B.F. GOODRICH GETS GREEN LIGHT FOR NEW PLANT

After determining that emissions from the proposed plant will not violate the National Ambient Air Quality Standards and after reviewing other data, EPA has approved the construction of a B.F. Goodrich plant in Henry, Illinois.

The approval was granted on condition that the new plant limit its actual emissions of volatile organic compounds to less than 41 tons per year. (Such compounds contribute to the formation of ozone.) Goodrich must also construct and operate the plant in accordance with descriptions presented in its final application for approval. In addition, the company must comply with all other applicable Federal, State, and local requirements.

To control pollution, Goodrich will use a series of recovery condensers and a process boiler for the combusion of volatile organic compounds, the overall efficiency of which is close to 100 percent.

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Environmental news briefs

EPA LENDS SUPPORT TO CHICAGO BOARD OF EDUCATION

The Waste Management Branch of EPA Region V opened its doors to Chicago Board of Education's Career Development Center for Environmental and Energy Management by donating a conference room for the Center's use. The room, located within EPA offices at 610 S. Canal Street, is used as a classroom and a base of operations for the citywide program. EPA staffers are available to the students to explain environmental issues and act as consultants for student projects.

In addition, staff members have made arrangements for students to visit the CID landfill in nearby Calumet City and have provided one student with an opportunity to work with the staff on the "Use It Again, Sam" office paper recycling program.

EPA Regional Administrator John McGuire said: "The Career Development Center has been a model guest. We are happy to continue this open-door policy for the Center's students and staff, because we think this represents a unique opportunity for Chicago students to view EPA operations and gain insights into environmental issues."

EXTENSIONS GRANTED TO OHIO EDISON

Ohio Edison received extra time from EPA's Region V Office to comply with Federal air pollution requirements. The extensions are for the Sammis, Niles, and Edgewater plants. The Sammis plant's Units 5 through 7 have until September 1, 1980, to comply; Units 1 through 4 have until March 1, 1980. For Niles and Edgewater plants the time extensions run till July 1, 1980.

The extensions were granted to provide Ohio Edison sufficient time to achieve compliance to maximize the use of Ohio coal.

The proposed extensions are enforcement orders that require compliance at specified future dates, but which in the meantime protect Ohio Edison from lawsuits and court penalties on the sulfur dioxide issue. Ohio Edison has not yet agreed to comply at the end of the period, raising a question about final issuance of the orders. The proposed orders will be subject to public comment before becoming final.

CONCERNED ABOUT PCBs IN FISH, THEY STILL EAT 'EM

Most people answering a recent questionnaire from the University of Wisconsin's Sea Grant Institute said they are concerned about PCBs in Great Lakes fish — but that concern hasn't stopped most of them from eating the fish.

Of 542 respondents, 79 percent said they were concerned about PCB levels in fish. Only 9 percent said they weren't concerned. But only 17 percent of 513 respondents said they had stopped eating fish because of PCBs. Seventy-two percent said they had not stopped eating Great Lakes fish, and the rest were undecided.

Questionnaires were filled out at the Wisconsin State Fair in Milwaukee. The survey revealed that 62 percent of 588 respondents fish in the Great Lakes at least once a year. Another 83 percent said that, even if they don't fish, they do eat Great Lakes fish. Sixty-one percent rated those fish superior eating to ocean fish.

CORRECTIONS
U.S. EPA REGION V HOTLINE '79

The following numbers were misprinted in the EPA Region V HOTLINE '79:

STATE EMERGENCY NUMBERS. Illinois (24 hours): (217) 782-7860. Ohio (24 hours): (800) 282-9378 — for calls within Ohio only; (614) 224-0946 — for calls outside Ohio.

If you have any corrections or additions for the HOTLINE '80 now under development, contact Kathy Brown, U.S. EPA Region V, 230 South Dearborn Street, Chicago, IL 60604; (312) 353-2072.

news around the region

ILLINOIS

• New connections or extensions to **municipal sewer systems** that would discharge 1,500 or more gallons of domestic sewage daily have been banned for 109 systems...with another 70 on the critical review list...according to Illinois EPA (IEPA). Restrictions apply to **commercial buildings** and **multiple residences,** but not single-family homes. The ban means that either the treatment plant has reached capacity or that sections of the sewer system in selected areas of the community have reached capacity, IEPA said.

• Preliminary data collected by IEPA from 43 monitoring sites around the State show that **ozone levels during the 1979 season have decreased,** reversing a three-year trend. There was only one Yellow Alert during 1979... compared to a record of eight in 1978, two in 1977, and five in 1976. **Highest one-hour ozone level** recorded this year was 186 parts per billion (ppb) at Waukegan...well below the 263 ppb registgered in Skokie in 1978 and the record 266 ppb at Waukegan in 1977.

INDIANA

• Between 10 million and 20 million gallons of **gasohol** were sold in the State this year... and the **demand is growing.** Besides private firms, the Indiana Farm Bureau Co-op also got into the act. It now sells gasohol in rural areas at pumps near grain elevators, or directly to farmers...through **72 affiliate co-ops** in various counties.

• The Indianapolis Clean City Committee is conducting a **paper recycling program** for high-grade office paper, computer tab cards, and computer printouts. The recycling of motor oil is also being recommended.

• **Hogs** with 16.2 parts per million (ppm) of PCBs in some of their organs have been found on a farm near **Sullivan.** Meat should not be eaten if it contains more than 5 ppm of PCBs, the State Board of Health said, but termed the Sullivan hogs **an "isolated" case...** no danger to human health.

MICHIGAN

• **New computer technology,** which will be used to fight toxic chemicals, is being developed jointly by U.S. EPA (EPA) and Michigan's Department of Natural Resources (DNR). The two-year project aims to identify potential toxic substances problems in their earliest stages through analysis of data on critical materials use and discharge. The computerized system will **store, sort, and retrieve data** on various facilities and will be able to identify potential noncompliers. EPA is providing $504,500 to the DNR for the $672,600 project.

• The danger of losing **whitefish** and **lake trout** in the Grand Traverse Bay and northern Lake Michigan areas is imminent, DNR said in its report to the State's Attorney General. **Nonregulated gill netting** must stop immediately, DNR stressed.

• A **DNR task force** was launched to identify during the next three to four months the State's hazardous and potentially harzardous **chemical dump sites**... estimated to be in the hundreds. This is a top-priority effort within the DNR, drawing resources from a number of existing programs.

• **Legislative capsules**... Public Act 83 authorizes municipalities to contract with a county to issue **bonds for sewer and water systems**...Public Act 85 ensures **fair compensation to farmers** who suffer losses due to State quarantine of contaminated livestock.

MINNESOTA

• **Air quality** and **noise monitoring** programs were carried out in the Minneapolis-St. Paul area to help prepare an Environmental Impact Statement for the proposed **I-35E freeway extension.** Noise monitors, at 17 locations, measured noise-sensitive areas such as schools, churches, and residences and were operated at various times of the day to assess predicted "worst noise" conditions at each location. Air quality monitoring for carbon monoxide was done at three sites, selected on the basis of adjacent land use, absence of air flow barriers, accessibility, and distance from major arterial roadways.

OHIO

• According to a **new rule** adopted by Ohio EPA, owners and operators in 18 counties must obtain a permit to operate facilities that transfer more than 240,000 gallons of gasoline annually from storage tanks to trucks or other motor vehicles. The aim is to **reduce gasoline loss** through vaporization and **cut down on the emission of hydrocarbons,** which contribute to the formation of ozone. The 18 counties affected by this new ruling include the State's major metropolitan areas.

WISCONSIN

• Wisconsin Department of Natural Resources (DNR) has begun a **two-year project** with the Federal Coastal Zone Management program to analyze microcontaminants in fish taken from 60 coastal locations in **Lakes Michigan and Superior.** The $135,000 federally funded project will aim to identify levels of the **"dirty sixteen" toxicants in fish.** The 16 toxicants, which EPA feels are among the most dangerous to man, include PCBs, DDT, chlordane, arsenic, cadmium, copper, mercury, aldrin, and others.

• Acting on a citizen's complaint, DNR moved quickly to clean up a warehouse in **Almond, Portage County,** where large amounts of **abandoned pesticides** and other chemicals were found. Tests have found contaminated soil under the building...

• There is no evidence that **motor trolling** is detrimental to the State's muskie population, says a report by the Bureau of Fish Management. It's more of a sociological, not biological, issue, the Bureau suggests.

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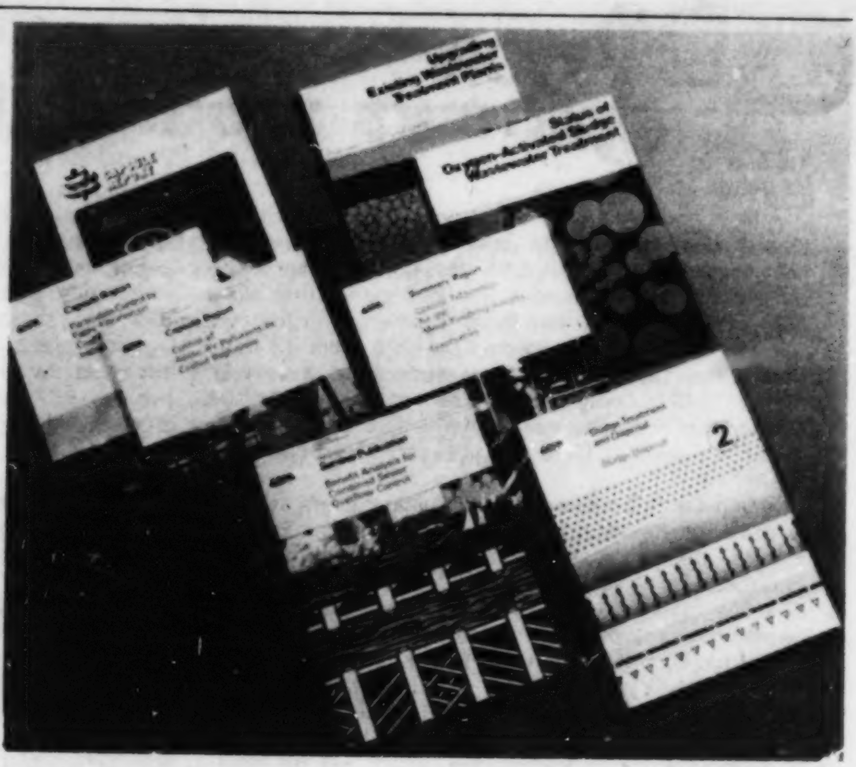
Explaining New Technology



A key part of EPA's research program is technology transfer, communicating the facts about new pollution control ideas and equipment to those needing the information. The goal is to speed the acceptance and use of these innovations.

More than 60 publications have been produced in EPA's technology transfer program over the past seven years. These are available from the Center for Environmental Research Information, Cincinnati, Ohio 45268. To receive one of these reports, write to the Center with the title and identifying number. There is no charge.

A list of the publications, with their title and number, follows:

Process Design Manuals

Phosphorus Removal	1001
Carbon Adsorption	1002
Suspended Solids Removal	1003
Upgrading Existing Wastewater Treatment Plants	1004
Sulfide Control in Sanitary Sewerage Systems	1005
Sludge Treatment and Disposal	1006
Nitrogen Control	1007
Land Treatment of Municipal Wastewater	1008
Wastewater Treatment Facilities for Sewered Small Communities	1009
Municipal Sludge Landfills	1010

Technical Capsule Reports

Recycling Zinc in Viscose Rayon Plants by Two Stage Precipitation	2001
Color Removal from Kraft Pulping Effluent by Lime Addition	2002
Pollution Abatement in a Copper Wire Mill	2003
First Progress Report Limestone Wet-Scrubbing Test Results at the EPA Alkali Scrubbing Test Facility	2004
Pollution Abatement in a Brewing Facility	2006
Flue Gas Desulfurization and Sulfuric Acid Production via Magnesia Scrubbing	2007
Second Progress Report Lime/Limestone Wet-Scrubbing Test Results at the EPA Alkali Scrubbing Test Facility	2008
Magnesium Carbonate Process for Water Treatment	2009
Third Progress Report Lime/Limestone Wet-Scrubbing Test Results at the EPA Alkali Scrubbing Test Facility	2010
First Progress Report Wellman-Lord SO_2 Recovery Process – Flue Gas Desulfurization Plant	2011
Swirl Device for Regulation and Treating Combined Sewer Overflows	2012
Fabric Filter Particulate Control on Coal-Fired Utility Boilers Nucla, CO and Sunbury, PA	2013
First Progress Report Static Pile Composting of Wastewater Sludge	2014
Efficient Treatment of Small Municipal Flows at Dawson, MN	2015
Double Alkali Flue Gas Desulfurization System Applied at the General Motors Parma, OH Facility	2016
Recovery of Spent Sulfuric Acid from Steel Pickling Operations	2017
Fourth Progress Report Forced Oxidation Test Results at the EPA Alkali Scrubbing Test Facility	2018
Control of Acidic Air Pollutants by Coated Baghouses	2020

Industrial Seminar Publications

Upgrading Poultry Processing Facilities to Reduce Pollution (3 Vols.)	3001
Upgrading Metal Finishing Facilities to Reduce Pollution (2 Vols.)	3002
Upgrading Meat Packing Facilities to Reduce Pollution (3 Vols.)	3003
Upgrading Textile Operations to Reduce Pollution (2 Vols.)	3004
Choosing the Optimum Financial Strategies for Pollution Control Systems	3005
Erosion and Sediment Control – Surface Mining in the Eastern U.S. (2 Vols.)	3006
Pollution Abatement in the Fruit and Vegetable Industry (3 Vols.)	3007
Choosing Optimum Management Strategies	3008
Controlling Pollution from the Manufacturing and Coating of Metal Products (3 Vols.)	3009

Municipal Seminar Publications

Upgrading Lagoons	4001
Physical-Chemical Wastewater Treatment Plant Design	4002
Status of Oxygen/Activated Sludge Wastewater Treatment	4003
Nitrification and Denitrification Facilities	4004
Upgrading Existing Wastewater Treatment Plants – Case Histories	4005
Flow Equalization	4006
Wastewater Filtration	4007
Physical-Chemical Nitrogen Removal	4008
Air Pollution Aspects of Sludge Incineration	4009
Land Treatment of Municipal Wastewater Effluents (3 Vols.)	4010
Alternatives for Small Wastewater Treatment Systems (3 Vols.)	4011
Sludge Treatment and Disposal (2 Vols.)	4012
Benefit Analysis for Combined Sewer Overflow Control	4013

Brochures

Environmental Pollution Control Alternatives Municipal Wastewater	5012
Forest Harvesting and Water Quality	5013
Irrigated Agriculture and Water Quality Management	5014
Forest Chemicals and Water Quality	5015
Environmental Pollution Control Alternatives – Economics of Wastewater Alternatives for the Electroplating Industry	5016

Handbooks

Monitoring Industrial Wastewater	6002
Industrial Guide for Air Pollution Control	6004
Continuous Air Pollution Source Monitoring Systems	6005

Industrial Environmental Pollution Control Manuals

Pulp and Paper Industry – Part 1/Air	7001
Textile Processing Industry	7002

Summary Reports

Sulfur Oxide Control Technology Series – Flue Gas Desulfurization – the Wellman-Lord Process	8001
Control Technology for the Metal Finishing Industry – Evaporators	8002

Executive Briefings

Environmental Considerations of Energy-Conserving Industrial Process Changes	9001
Environmental Sampling of Paraho Oil Shale Retort Process	9002

CONSTRUCTION GRANTS

ILLINOIS

Applicant	Award Amount	Date
Heprin	$61,225	09/24
Gilman	5,700	09/28
Glendale Heights	13,350	09/11
Grand Ridge	2,700	09/28
LaGrange	35,850	09/10
Havana	3,675	09/26
Columbia	226	09/07
South Lyons Twp.	38,550	09/12
Plainfield	67,725	09/12
MSD of Greater Chicago	144,450	09/10
Jonesboro	6,525	09/20
MSD of Greater Chicago	103,575	09/28
Addison	71-	09/07
Columbia	2,100	09/19
Bloomington & Normal SD	63,600	09/20
Princeville	9,770	09/11
Dekalb SD	197,700	09/07
East St. Louis	680,025	09/17
Cisena Park	33,000	09/06
Galesburg SD	10,800	09/28
Libertyville	73,575	09/28
Glen Ellyn	265,125	09/20
Mt. Carroll	100,725	09/17
MSD of Greater Chicago	7,074,675	09/07
MSD of Greater Chicago	978,825	09/24
Mt. Vernon	55,716-	09/17

INDIANA

Applicant	Award Amount	Date
Wanatah	$ 9,375	09/28
Francesville	10,875	09/25
Belleville Cons. Distr.	25,875	09/28
Burlington	17,925	09/26
Dyer	15,450	09/06
Walton	8,625	09/26
Monroe	5,940-	09/17
Williams Creek	3,819-	09/12
St. John	11,850	09/13
DeMotte	12,000	09/12
Worthington	1,245,173-	09/07
Schererville	34,811-	09/26
Richmond SD	19,410,525	09/28
Elkhart	1,218,000	09/28
Monroe	243,750	09/28
Merrillville CD	7,603,275	09/26
Greenwood	575,400	09/26
Williams Creek	439,050	09/26
Walton	522,525	09/28
Richmond	9,768,300	09/26
Geneva	687,750	09/26
Delaware County RS	2,508,300	09/28
Schneider	730,650	09/28
North Salem	897,375	09/26
Hebron	92,775	09/26

MICHIGAN

Applicant	Award Amount	Date
Adams Twp.-South Range	$4,425	09/11
Wayne Co. Huron Valley	449,625	09/26
Kalamazoo	12,150	09/05
Jackson County	2,100	09/19
Lenawee	11,955	09/24
Maplette	6,150	09/06
Lake Odessa	35,700	09/17
Pere Marquette Twp.	11,250	09/06
Oakland County	123,075	09/11
Detroit	5,244,300	09/17
Newaygo	22,125	09/12
St. Clair County DPW	45,638	09/24
Fowlerville	8,625	09/21
Unionville	4,200	09/26
Bay City	21,800	09/12
Lenawee County	281,925	09/11

MINNESOTA

Applicant	Award Amount	Date
Royalton	$47,475	09/11
Princeton	56,250	09/10
Tyler	34,500	09/11
Ostrander	32,250	09/10
Lowry City	29,175	09/26
Spring Grove	18,975	09/26
Crooked Lake Twp.	27,975	09/11
Moorhead	9,300	09/17
Willmar	9,150	09/19
Claremont	8,400	09/28
Metro Waste Contr. Comm.	36,450	09/28
Grand Rapids	100,383-	09/10
Dover-Eyota-St. Charles SD	31,575	09/26
Roxhester	38,829,375	09/28
Moorhead	3,456,600	09/28
Morris	446,700	09/26
Albert Lea	24,911,250	09/28
Buffalo	2,180,700	09/28
Big Lake	3,541,350	09/28
Zumbrota	1,576,275	09/28

OHIO

Applicant	Award Amount	Date
Van Wert	$255,008	09/28
Troy	181,200	09/28
Loncil	1,425	09/19
Waverly	24,000	09/28
Lucas County	27,075	09/06
Delta	7,650	09/10
Hamilton County	225,000	09/19
Lucas County	8,550	09/06
London	122,250	09/12
Stark County	390,525	09/12
Delta	41,550	09/10
West Carrollton	48,675	09/28
Port Clinton	109,650	09/28
Clarksburg	20,625	09/28
Marietta	95,850	09/28
Yellow Springs	74,850	09/28
Dalton	50,625	09/28
New London	37,500	09/28
Bedford	97,875	09/28
Columbus	56,250	09/28
Doylestown	27,975	09/17
Christiansburg	3,075	09/11
Kent	27,075	09/28
Commercial Point	4,500	09/28
Piqua	14,625	09/28
Lakewood	1,366,350	09/28

WISCONSIN

Applicant	Award Amount	Date
Niagara	$12,983	09/11
MSD of Milwaukee Co.	589,325	09/19
Eden	1,650	09/12
Mercer	3,450	09/12
Wausau	23,550	09/26
Chili SD	9,000	09/19
Neenah	34,500	09/28
Oliver	9,975	09/28
Sparta	12,600	09/28
Fox Lake SD 2	30,225	09/10
Nasewaupee SI 1	24,000	09/26
Herman	15,950	09/28
North Lake Poygan SD	18,075	10/28
Radisson	16,050	09/19
Rozellville	6,000	09/28
Dorchester	14,175	09/26
Cecil	12,375	09/26
Little Falls	9,000	09/26
Saukville	25,745	09/26
Marion	1,871-	09/28
Delavan	22,500	09/28

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FEDERAL REGISTER

■ **SEPTEMBER 17, 1979 - RULES:** Air quality implementaion plans; delayed compliance orders: Indiana Ohio. Water pollution control: Hazardous substances; determination of reportable quantities; calcium oxide and calcium hydroxide; delay of effective date. **PROPOSED RULES:** Air quality implementation plans, various States; approval of plan revisions for non-attainment areas; supplement to general preamble. **NOTICES:** Air quality implementation plans; approval and promulgation: Prevention of significant air quality deterioration (PSD); final determinations. Pesticides: experimental use permit applications: Bendiocarb et al. Permethrin et al. Radiation protection guidance for occupational exposures; proposed recommendations and hearings. Water quality standards; navigable waters of North Carolina. ■ **SEPTEMBER 18, 1979 - RULES:** Air programs; approval and promulgation: State plans for designated facilities and pollutants: Connecticut, et al. Louisiana. Air quality control regions; criteria and control techniques: Attainment status designations; correction. Air quality implementation plans; approval and promulgation; various States, etc.: Georgia. Air quality implementation plans; delayed compliance orders: North Carolina Ohio (3 documents). **PROPOSED RULES:** Air pollution; standards of performance for new stationary sources: Internal combustion machines; extension of time. Air quality implementation plans; approval and promulgation, etc.: Prevention of significant air quality deterioration (PSD); hearings, etc. Air quality implementation plans; approval and promulgations; various States, etc.: Missouri. Toxic substances: Data reimbursement; advance notice. Water pollution control: Disposal sites for dredged or fill material; section 404 guidelines. **NOTICES:** Air pollution; applicability determinations to permit interpretation requests: Getty Oil Co. Air quality implementation plans; approval and promulgation. Prevention of significant air quality deterioration. (PSD); final determination. Meetings: Science Advisory Board. Pesticides; emergency exemption applications. Benomyl, Ethephon, Mesurol Methomyl Parmethrin (2 documents). Tetraethylpyrophosphate (TEPP). Toxic and hazardous substances control: Premanufacture notice. Water pollution control: Vessel sewage discharges in drinking water intake zones; prohibition petitions. Water quality standards. State; adoptions and approvals. ■ **SEPTEMBER 19, 1979 - RULES:** Air quality control regions; criteria and control techniques: Attainment status designations. Inkless finger printing systems; exemption from chlorofluorocarbon rule. Noise abatement programs: Air compressors, portable, and medium and heavy trucks; continued testing hearing provision. Toxic substances: Chlorofluroralkanes, fully halogenated, use in aerosol propellants; relief to certain manufacturers of pyrethrin pesticides. Polychlorinated biphenyls; disposal requirements; expedited approval of Sedgwick County, Kansas, chemical waste landfill facility. **PROPOSED RULES:** Air quality implementation plans; delayed compliance orders: Utah; withdrawal. Waste management, solid: Hazardous waste guidelines and standards; statistical test change. **NOTICES:** Air quality standards: Automotive lead emissions; procedures for estimating; availability. Pesticides; emergency exemption applications: Blasagran/Vistar 2S Blazer (2 documents). TEPP Pesticide registration, cancellation, etc.: EPN Hercron luretape with disparlure. Hercon luretape with grandlure. Toxicant hazardous substances control: Premanufacturing notices; monthly status report. ■ **SEPTEMBER 20, 1979 - RULES:** Air quality implementation plans; delayed compliance orders: Ohio. **PROPOSED RULES:** Air quality implementation plans; approval and promulgation; various States, etc.; Illinois; correction. Air quality implementation plans; delayed compliance orders: South Carolina. Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: Atrazine Carbaryl. Pesticide programs: Closed system packaging; advance notice. Toxic substances: Asbestos-containing materials in school buildings. **NOTICES:** Air pollution; ambient air monitoring reference and equivalent methods applications; etc.: CO Analyzer Model 8840 Nitrogen Oxides Analyzer. Thermo Electron Model 14 B/E Chemiluminescent. NO-NO_2NOx Analyzer. Environmental statements; availability, etc.: St. George area of Washington County, Utah; wastewater treatment facilities. Meetings: State-FIFRA Issues Research and Evaluation Group (2 documents). ■ **SEPTEMBER 21, 1979 - RULES:** Air quality implementation plans; approval and promulgation; various States, etc.; South Carolina, South Dakota; effective date. Water pollution control: Solid waste disposal facilities and practices; classification criteria; corrections. **PROPOSED RULES:** Air pollution; standards of performance for new stationary sources; Phosphate rock plants. Air quality implementation plans, approval and promulgation; various States, etc.; Tennessee. **NOTICES:** Environmental statements; availability, etc.; Agency statements, weekly receipts. Boulder wastewater treatment facility, Colo.; meeting. Meetings: Scientific Advisory Panel. ■ **SEPTEMBER 24, 1979 - RULES:** Air quality implementation plans; approval and promulgation; various States etc.; Texas. **PROPOSED RULES:** Pesticide programs: Registration standards; sample availability. **NOTICES:** Air pollution; standards of performance for new stationary sources; Wyoming; authority delegation. Meetings: Science Advisory Board. ■ **SEPTEMBER 25, 1979 - RULES:** Air pollutants, hazardous; National emission standards; General provisions; definitions. Air pollution; standards of performance for new stationary sources; General provisions; definitions. **PROPOSED RULES:** Air quality implementation plans; approval and promulgation; various States, etc. Arizona; petitions for reconsideration of process weight regulation, proposed response. Pesticide programs: Registration guidlelines; human and domestic animal hazard evaluation; comment period reopened. Water pollution control: National Pollutant Discharge Elimination System. (NPDES) and Surface Coal Mining and Reclamation Operations (SCMROs) permit programs; memorandum of understanding with OSM; advance notice. **NOTICES:** Environment and conservation in the Federal Nonnuclear Research and Development Program; hearing; republication. Water pollution control: Coal mining; effluent guidelines and new source performance standards; technical reports, availability; extension of time. ■ **SEPTEMBER 26, 1979 - PROPOSED RULES:** Air quality implementation plans; approval and promulgation: Emission monitoring of stationary sources; advance notice; extension of time. Air quality implementation plans; approval and promulgation; various States, etc.; Washington. Air quality implementation plans; delayed compliance orders: Ohio. Air quality implementation plans; preparation, adoption, and submittal: Prevention of significant air quality deterioration (PSD); hearing. Water pollution; effluent guidelines for certain point source categories: Chemicals manufacturing and plastics industries; extension of time. Leather tanning and finishing; technical and economic development information availability, and comment period initiation. **NOTICES:** Air quality implementation plans; approval and promulgation: Prevention of significant air quality deterioration (PSD); final determination. Environmental statements; availability, etc.: Weld County, Colo.; Greeley wastewater treatment facilities, construction and design. Toxic and hazardous substances control: Confidential data; release to contractors. Premanufacture notices receipts. ■ **SEPTEMBER 27, 1979 - RULES:** Toxic substances: Chlorofluoroalkanes, fully halogenated; inkless fingerprinting systems; exemption; correction. **PROPOSED RULES:** Air quality regions; criteria and control techniques. Attainment status designations. Air quality implementation plans, approval and promulgation, various States, etc.: Montana, extension of time. **NOTICES:** Air quality implementation plans; approval and promulgation. Prevention of significant air quality deterioration (PSD) permit approvals. Water pollution, discharge of pollutants; Illinois and Washington. ■ **SEPTEMBER 28, 1979 - RULES:** Noise abatement programs: Hearing protectors; labeling requirements. Product labeling provisions. **NOTICES:** Environmental impact statements, availability. ■ **OCTOBER 1, 1979 - RULES:** Noise abatement programs: Transportation equipment; truck-mounted solid waste compactors. Water pollution; effluent guidelines for certain point source categories: Electroplating; correction. **NOTICES:** Water pollution control: Toxic substances; water quality criteria; inquiry. ■ **OCTOBER 2, 1979 - RULES:** Air quality implementation plans; approval and promulgation; various States, etc. Massachusetts. Air quality implementation plans; delayed compliance orders: Pennsylvania. **PROPOSED RULES:** Air programs; energy-related authority; delayed compliance orders, etc.: Virginia. Air quality implementation plans approval and promulgation; various States, etc.; California et al. Oklahoma; extension of time, Tennessee. Air quality standards; particulate matter and sulfur oxides. Toxic substances: Polychlorinated biphenyls (PCBs) and fully halogenated chlorofluoralkanes; export notification procedures. Waste management, solid: Hazardous waste guidelines and standards; information availability and request for comments. **NOTICES:** Environmental statements; availability, etc.; Metropolitan Seattle's (Metro) Renton sewage treatment facility, Wash. Meetings: Environmental Cancer and Heart and Lung Disease Task Force. Disease Task Force. FIFRA Scientific Advisory Panel; correction Pesticide registration, cancellation, etc.: Kabat tobacco protector. Pesticides; experimental use permit applications; 3-phenoxybenzyl d-cis et al.; correction Propyl (3-(dimethylamino propyl) carbamate monohydrochloride) Pesticides; tolerances in animal feeds and human foods: Dow Chemical Co. Mobay Chemical Corp. Water quality standards, State; adoptions and approvals; Delaware. ■ **OCTOBER 3, 1979 - PROPOSED RULES:** Air quality implementation plans; preparation, adoption, and submittal: Prevention of significant air quality deterioration (PSD); hearing; correction. Research and development grants and cooperative agreements; proposed policies and procedures for review and award; advance notice. Water pollution control: Hazardous substances; determination of reportable quantities; extension of time. **NOTICES:** Water pollution control: Safe drinking water, underground injection control program; State list; additions. ■ **OCTOBER 4, 1979 - RULES:** Motor vehicle fuel economy: Gas guzzler tax statement, labeling requirements for 1980 model year automobiles. **PROPOSED RULES:** Air programs; approval and promulgation; State plans for designated facilities and pollutants: Delaware et al. Air quality implementation plans; approval and promulgation; various States, etc.; California, Missouri; correction New Hampshire. Air quality implementation plans, etc.: State implementation plans; requirements for preparation, adoption and submittal and approval and promulgation; correction. Energy programs: Fuel economy, motor vehicles; labeling requirements for 1981 and later model years; gas guzzler tax label. **NOTICES:** Meetings: Energy emergencies and availability of low sulfur residual fuel oil. ■ **OCTOBER 5, 1979 - RULES:** Air quality implementation plans; approval and promulgation; various States, etc. Colorado. **PROPOSED RULES:** Air pollution; standards of performance for new stationary sources: Automobile and light-duty truck surface coating operations. Air quality implementation plans; approval and promulgation; various States, etc. Colorado. Pesticide programs: Pesticide products; restricted use classifications; extension of time. Water quality standards; surface waters of the State of Ohio; extension of comment period. **NOTICES:** Environmental statements; availability, etc. Agency statements, weekly receipts. Meetings: Environmental Pollutant Movement and Transformation Committee. Pesticide registration, cancellation, etc. Norflurazon. Pesticides; tolerances in animal feeds and human food; FMC Corp et al. ICI Americas, Inc. Privacy Act; proposed systems of records; amendment. Toxic and hazardous substances control. Confidential data; release to contractors. Premanufacture notices receipts. ■ **OCTOBER 9, 1979 - RULES:** Air quality control regions; criteria and control techniques; attainment status designations: Ohio. Water pollution control: Disposal sites, denial or restriction section 404 procedures. **PROPOSED RULES:** Air programs; approval and promulgation. State plans for designated facilities and pollutants: Alaska et al. Air quality implementation plans; approval and promulgation; various States, etc.: New Hampshire. Air quality standards; national primary and secondary. Particulate matter and sulfur oxides. (Editorial note: This document, appearing at page 56730 in the October 2 Federal Register, was mistakenly carried in the table of contents under the entry "Air quality implementation plans; approval and promulgation; various States, etc.". (It should have appeared as a separate entry.) ■ **OCTOBER 10, 1979 - PROPOSED RULES:** Air pollutants, hazardous; National emission standards: Airborne carcinogens; identification; policies and procedures. Carcinogenic organic chemical sources; generic standards; advance notice. Air pollution; standards of performance for new stationary sources: Continuous monitoring performance specifications. **NOTICES:** Air pollution control, new motor vehicles and engines: California, public hearing. ■ **OCTOBER 11, 1979 - RULES:** Water pollution control: Hazardous substances; determination of reportable quantities; correction. **PROPOSED RULES:** Air programs; energy facilities, delayed compliance orders: Massachusetts. Air quality implementation plans; approval and promulgation; various States, etc.: Missouri. **NOTICES:** Pesticide registration, cancellation, etc.: Thiophanate-methyl. Toxic and hazardous substances control: Premanufacture notices receipts. Water pollution control; safe drinking water; public water systems designations: Florida. ■ **OCTOBER 12, 1979 - RULES:** Water pollution control: Hazardous substances; determination of reportable quantities; correction Solid waste disposal facilities and practices; classification criteria; correction. **PROPOSED RULES:** Air quality control regions, criteria, and control techniques: Attainment status designations; Texas. Air quality implementation plans; approval and promulgation; various States, etc.: Kansas. Toxic substances: Polybrominated biphenyls (PBBs) and tris (2,3-dibromopropyl) phosphate; importation or manufacture notice requirement. Waste management, solid: Hazardous waste guidelines and standards; criteria; extension of time. **NOTICES:** Air programs; fuel and fuel additives: Lead phase-down regulations and ban on use of MMT; guidelines for administration. Methicyclopentadienyl manganese tricarbonyl (MMT); suspension; enforcement date reaffirmed. Meetings: Science Advisory Board. Pesticides; experimental use permit applications: Bendiocarb et al.; 2-diethoxyletethyl benzimidazole carbamate; correction. ■ **OCTOBER 15, 1979 - RULES:** Pesticides; tolerances in food: Oxyfluorfen. **PROPOSED RULES:** Air quality implementation plans; approval and promulgation: various States, etc. Ohio. **NOTICES:** Air pollution control: Clean Air Act; local or regional economic disruption and unemployment prevention in Ohio; reproposed determination; rescheduled hearing and extension of time. Pesticides; temporary tolerances: Oxyfluorfen. Water pollution control; safe drinking water, public water systems designations: Maryland. ■ **OCTOBER 16, 1979 - RULES:** Air quality implementation plans; delayed compliance orders: West Virginia. **PROPOSED RULES:** Air quality implementation plans; approval and promulgation; various States, etc.: Maryland, Nevada. Toxic Substances: Premanufacture or importation notification requirements and review procedures; notice forms and reporting provisions; reproposal Water quality standards, State; adoptions and approvals: North Carolina. **NOTICES:** Air quality criteria: Chlorinated hydrocarbons; inquiry; 1,1,2-trichloro-1,2,2-trifluoroethane; correction. Meetings: Interagency Toxic Substance Data Committee; date change. ■ **OCTOBER 17, 1979 - RULES:** Pesticide chemicals in or on raw agricultural commodities, tolerances and exemptions, etc.: Chlorpyrifos. Pesticides; tolerances in animal feeds; Thidiazuron. **PROPOSED RULES:** Toxic Substances: Asbestos fibers, commercial and industrial use; advance notice. **NOTICES:** Air quality implementation plans; approval and promulgation: Nevada; temporary emergency suspension disapproved. Environmental statements; availability, etc.: Agency statements, weekly receipts. Agency statements, weekly receipts; correction. Pesticide applicator certification; cotton defoliants in Arizona; advisory opinion. Pesticide registration, cancellation, etc.; Amitraz; correction. Amitraz. Bayleton technical Bayleton 50% wettable powder. Bayleton 25% wettable powder. Sumithion 8-E. Pesticides; emergency exemption applications: Permethrin (2 documents) Permethrin and fenvalerate. Terramycin. Velpar. Pesticides; temporary tolerances. Thidiazuron. Toxic and hazardous substances control: Aromatic haloethers; denial of petition to remove from toxic pollutant list. Asbestos fibers; commercial and industrial use; policy statement on coordination of regulatory activities. Premanufacture notices receipts (2 documents) Premanufacture notices; monthly status report. ■ **OCTOBER 18, 1979 - PROPOSED RULES:** Air quality implementation plans; delayed compliance orders: West Virginia; withdrawn (2 documents) **NOTICES:** Energy emergencies and availability of low sulfur residual fuel oil; correction. Science Advisory Board (2 documents) Toxic and hazardous substances control: Asbestos cement water pipes; rulemaking petition approved. ■ **OCTOBER 19, 1979 - RULES:** Motor vehicle fuel economy: Calculation; technical amendment. **PROPOSED RULES:** Air Quality control regions, criteria, and control techniques: Attainment status designations. Air quality implementation plans; approval and promulation; various States, etc.: Missouri. Grants; State and local assistance; Pesticide applicator training and certification programs; enforcement.

OFF THE PRESS

WATER WHEEL: YOUR GUIDE TO HOME WATER CONSERVATION

Turn this "magic" wheel to one of the 16 potential water-wasting areas around the house and in the pie-shaped cutout you'll find helpful hints on how to conserve water...and save money. The wheel, printed on both sides, lists such areas as kitchen and bathroom sinks, garbage grinder, dishwasher, lawn and garden, toilet, driveway and street, pipes, backyard pool, and more. **Free** from the Office of Public Information, U.S. EPA Region V, 230 S. Dearborn St., Chicago, IL 60604; (312) 353-2072.

MONTHLY AWARDS FOR CONSTRUCTION GRANTS FOR WASTEWATER TREATMENT WORKS

A new publication which is especially helpful to consultants, engineers, community planners, and others interested in construction grant information. Lists all awards made during a specific calendar month for wastewater treatment under PL 92-500. Includes stages of construction, census population, amounts of the awards, and project descriptions. Annual subscription: $29 domestic; $36.25 foreign. Order from and make checks payable to: Superintendent of Documents, Government Printing Office, Washington, DC 20402.

ENVIRONMENTAL IMPACT STATEMENT DIRECTORY

This directory lists, according to agency, types of projects for which Environmental Impact Statements (EISs) may be prepared, officials responsible for deciding whether or not an EIS will be prepared, and

Continued next page

organizational unit that prepares the EIS for the agency. Addresses and reference telephone numbers of each agency are included, as well as a cross-index, which categorizes project types and indicates the corresponding agency or agencies that may sponsor such projects. (See note below.)

ENVIRONMENTAL IMPACT ASSESSMENT GUIDELINES FOR SELECTED NEW-SOURCE INDUSTRIES

These guidelines, supplemented by specific instructions as necessary, are intended to provide applicants for new-source permits sufficient information to prepare the written environmental assessment. Consists of a general guideline, providing assessment guidance on all industrial categories, and appendices providing more detailed guidance on specific industries. (See note below.)

STATEMENT OF CONCERNS AND SUGGESTED ECOLOGICAL RESEARCH. REPORT NO. 1 OF LAKE MICHIGAN COOLING WATER STUDIES PANEL

The objective of this report has been to produce a statement of concerns which would assist in development of investigations of the effects of cooling water used on Lake Michigan. It is an attempt to focus further on the key gaps in understanding, to spark research, and to help realize goals. Sections cover such topics as measurement of the effects of cooling water use on physical and chemical parameters, on primary producer and consumer communities, on macrozoobenthos, on fishery, and on entrapped and entrained organisms. (See note below.)

The three publications above are yours FREE from Bill Franz, Office of Intergovernmental and External Programs, U. S. EPA Region V, 230 S. Dearborn St., Chicago, IL 60604; (312) 353-3307.

PEOPLE

Charlie H. Smith, an EPA attorney, has been appointed as Ohio coordinator in EPA V Region administrator's office. She formerly served with the Regional Air and Water Enforcement branches.

Jerzy Kurbiel, head of the Sanitary Engineering Department at the Technical University of Krakow, Poland, visited EPA Region V offices in mid-November with two colleagues: **Jan Krokowski** and **Tadeusz Lagosz**. Kurbiel is the foremost environmental expert in Poland, holding the equivalent position of U.S. EPA administrator.

The Instrument Society of America has nominated **Joseph F. Roesler** to receive the Water and Wastewater Industries Division award in recognition of his contributions to the Division and its members. Roesler, an environmental engineer with EPA's Environmental Research Center in Cincinnati, also serves on the 12-member Regional Services Staff...responsible for communications between the Office of Research and Development in Washington and EPA's 10 regional offices.

KURBIEL

EPA's newly created Environmental Criteria Assessment Office (ECAO) in Cincinnati is headed by **Dr. Jerry F. Stara**. He plans and coordinates ECAO's main goal of collecting, summarizing, and evaluating all available scientific data, from this country and abroad, on the toxic effects of environmental pollutants. Stara works with more than 500 scientists worldwide.

Ronald G. Blankenbaker, MD, is the new Indiana State Health Commissioner and Secretary of the Indiana State Board of Health. An advocate of preventive medicine, Dr. Blankenbaker is also the annual meeting chairman of the Society of Prospective Medicine, a group he helped found. He was previously the chairman and a professor of the Department of Family Medicine at University of Florida's College of Medicine at Tampa.

Two Michigan representatives are among the top six legislators on ecology and energy projects. **William Brodhead** (D-Detroit) and Robert Carr (D-Lansing) received this distinction from the League of Conservation Voters, a Washington-based group who surveyed the legislators on 30 key votes during the 1978 session. Twelve of the Michigan congressmen rated "well above average" in this study.

NOV's

- Morgan Adhesives Co., Stow, OH; hydrocarbons.
- Steel Container, Inc., Hammond, IN; hydrocarbons.
- Dundee Cement Co., Dundee, MI; particulates.
- Hardy Salt Co., Manistee, MI; particulates.
- Hicks Oil & Hicks Gas, Inc., North Pekin, IL; hydrocarbons.

A Notice of Violation (NOV) is an official warning from the EPA that a source is not complying with existing air pollution control regulations. The polluter has 30 days from the notification date to negotiate a compliance schedule before EPA can issue a Compliance Order or seek civil or criminal actions.

ENVIRONMENTAL IMPACT STATEMENTS

Sponsoring Agency, Project Number, Type of EIS	Project Location	Description	Summary of Comments	Date, Rating
Federal Aviation Administration 75-016-412	Indianapolis, IN	Construction of new runway.	Reservations regarding adequacy of noise and air impact assessments.	9/5 3
Housing and Urban Development 79-036-1036 Draft	Madison, WI	Capitol Center project. Construction of housing, senior citizens' center, supermarket, and parking facility.	No major objections.	9/5 LO-1
Housing and Urban Development 79-038-1033 Draft	Detroit, MI	Cadillac Center Shopping Mall.	Inadequate air quality and noise analysis.	9/5 3
Interstate Commerce Commission 79-051-1700 Draft		Discontinue operation of Trains 453-56 between Valparaiso, IN and Chicago, IL.	Potential adverse impacts upon attainment and maintenance of air quality standards.	9/10 ER-2
Corps of Engineers 79-049-194 Draft	Snake River, MN	Snagging and clearing for flood control.	Maintenance plan should be developed.	9/11 LO-1
Forest Service 79-044-903 Draft	Huron National Forest, MI	Wild and Scenic River Study.	Concerns regarding impacts due to potential changes in upstream land use patterns.	9/11 LO-1
Soil Conservation Service 79-050-935 Draft	South Fork Licking River, OH	Construction of six flood retarding reservoirs, one multi-purpose reservoir, two recreational developments, a flood prevention dike, and stream channel improvements.	Concerns regarding deterioration of water quality and wildlife habitat. Request additional soil information.	9/21 ER-2
Federal Highway Administration 79-041-421 Draft	Chicago, IL.	Reconstruction, widening of Stony Island Avenue, 64th-70th Sts.	Reservations regarding air quality impacts. Lack of adequate discussion of alternatives.	9/20 ER-2
Corps of Engineers 79-042-133 Draft Supplement	Sault Ste. Marie, MI.	Extension of vessel navigation season in St. Mary's River.	Concerns regarding water quality and wetlands impacts, unrecovered oil spills and secondary impacts. Request more complete analysis of alternatives.	9/20 ER-2
Rural Electrification Administration 78-011-916 Final	Genoa, WI to Lansing, IA	16kv transmission line.	Previous comments adequately addressed.	9/19
Rural Electrification Administration 79-054-914 Draft	Milaca, MN	Construction of 230 KV transmission line.	Request more detailed soil analysis.	9/27 LO-2
Federal Highway Administration 79-037-421 Draft	Madison Co., IL	FAP Route 785, Construction 4-lane highway and bridge.	Request additional noise information, secondary impact assessment, mitigation for CO violation.	9/25 LO-2
Corps of Engineers 77-080-133 Final	Les Cheneaux Island Federal Navigation Channels, MI	Confined disposal and maintenance dredging.	Previous concerns adequately addresses.	9/28

CODE:

LO—Lack of objections or minor changes suggested.
ER—Environmental reservations on certain aspects of project; suggest further study of modifications or alternatives.
EU—Proposed action environmentally unsatisfactory, potential safeguards are insufficient.
1—Adequately sets forth impact and alternatives to proposed action.
2—Insufficient information; EPA cannot fully assess project but can make preliminary determination of impact.
3—Draft inadequately assesses project and/or alternatives, EPA requests substantial revisions in draft.

All Region V EIS Comments are prepared by the Office of Federal Activities, Environmental Impact Review Staff. For more information or to obtain copies of EIS comments, contact Barb Taylor at (312) 353-2307, U.S. EPA, Region V, 230 S. Dearborn St., Chicago, IL 60604.

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1979 calendar

DECEMBER 3-5

HEALTH EFFECTS OF DIESEL ENGINE EMISSIONS. Symposium sponsored by U.S. EPA Health Effects Laboratory. At Stouffer's Cincinnati Towers, 141 6th St., Cincinnati, OH. EPA contact Robert Danner (513) 684-7409. For reservations contact Virginia Hathaway, JACA Corporation, 550 Pinetown, Fort Washington, PA 19034; (215) 643-5466.

DECEMBER 4-6

SMALL FLOWS—TECHNOLOGY TRANSFER SEMINAR, sponsored by U.S. EPA's Environmental Research Information Center. **Philadelphia, PA.** Contact Albert Montague, U.S. EPA Region III, 6th & Walnut Streets, Philadelphia, PA 19106; (215) 597-9856.

DECEMBER 5-7

SMALL FLOWS—TECHNOLOGY TRANSFER SEMINAR, sponsored by U.S. EPA's Environmental Research Information Center. **Orlando, FL.** Contact Asa B. Foster, Jr., U.S. EPA Region IV, 345 Courtland St. NE, Atlanta, GA 30308; (404) 881-4450.

DECEMBER 13-14

INNOVATIVE AND ALTERNATIVE TECHNOLOGY—TECHNOLOGY TRANSFER SEMINAR, sponsored by U,S. EPA's Environmental Research Information Center. **Dallas, TX.** Contact Mildred Smith, U.S. EPA Region VI, 1201 Elm St., First National Building, Dallas, TX 75270; (214) 767-2697.

FEBRUARY 4-6

ROTATING BIOLOGICAL CONTRACTOR TECHNOLOGY NATIONAL SYMPOSIUM. Sponsored by U.S. EPA, University of Pittsburgh, and U.S. Army Corps of Engineers. Construction Engineering Research Laboratory, at Seven Springs Mountain Resort, **Champion, PA.** Fee $75. Contact Dr. Yeun C. Wu, 944 Benedum Hall, Dept. of Civil & Environmental Engineering, University of Pittsburgh, Pittsburgh, PA 15261; (412) 624-5357.

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